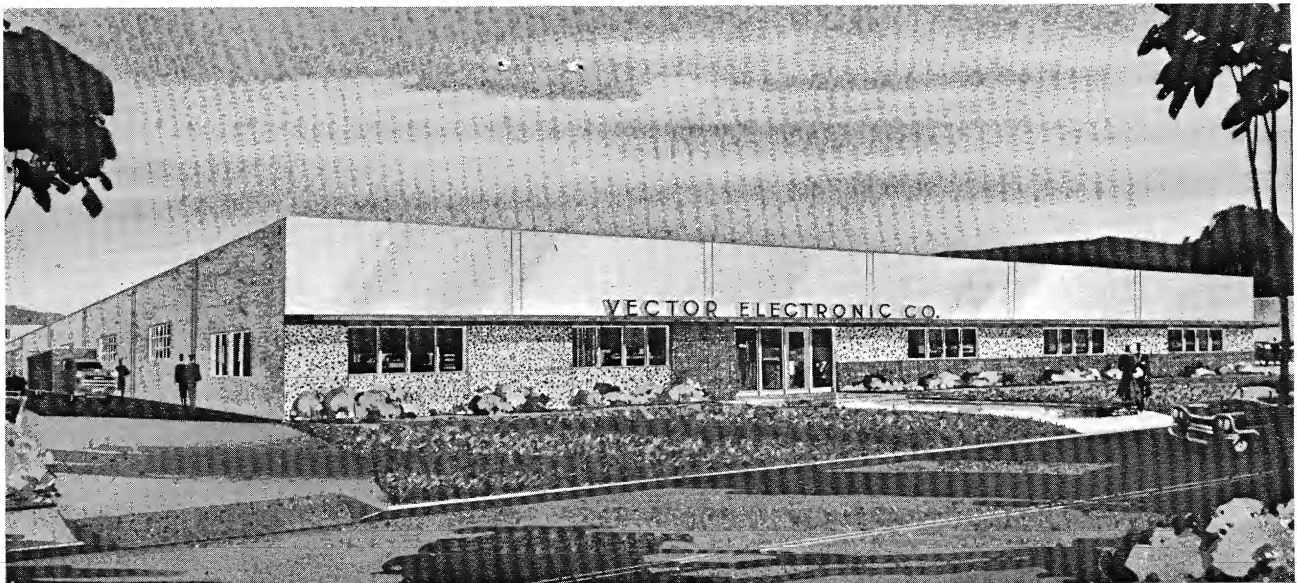




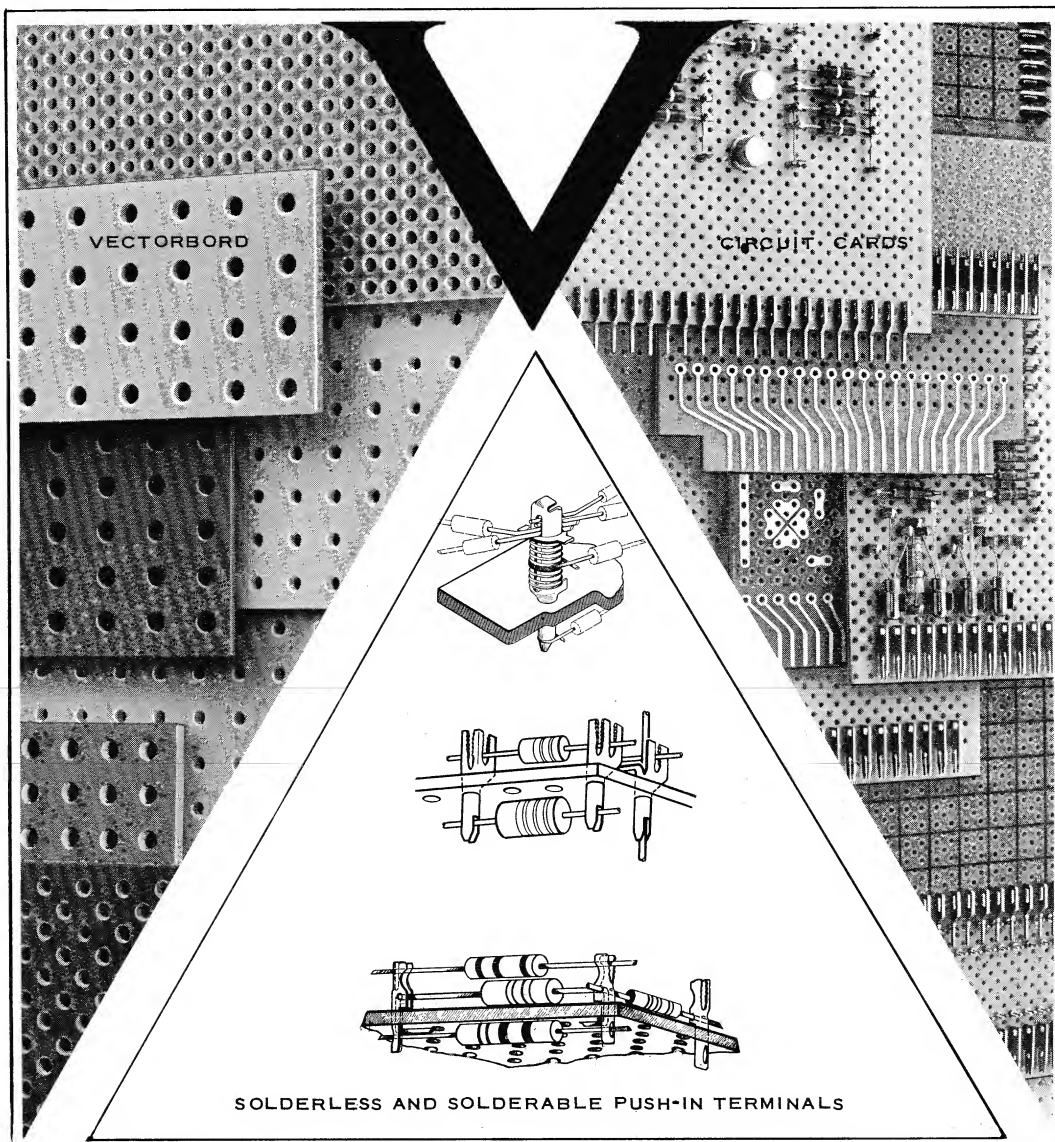
**STRUCTURES for
CIRCUITRY**



VECTOR ELECTRONIC COMPANY
INCORPORATED



VECTOR products are made in an ultra-modern 20,000 square foot plant in the new Grand Central Industrial tract of Glendale only 20 minutes away from down-town Los Angeles via the Golden State Freeway. Here originate a large variety of unique mounting devices, many covered by **VECTOR** patents, which facilitate the assembly of electronic circuitry.



For Product

See Section

ADAPTERS-VOLTAGE TEST P.1, EXPERIMENTERS & SOCKET CHANGE PG.2, CURRENT TEST PG.3

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BATTERY CLIPS PG.8

BLANK PLUGBORDS PG.3

BRACKETS, GENERAL PG.1

BRACKETS, POT & SWITCH . . . PG.8

"BREADBOARD" PAPER PG.2

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BUS STRIP PG.4

CABLE CONNECTORS PG.2

CANS, CASES, COVERS

CARD GUIDES PG.2, 16

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CARD CAGE PG.15

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CONTACT STRIPS PG.4

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X MOUNTING HDWR.

IV PLUGBORDS

X MOUNTING HDWR.

X MOUNTING HDWR.

II VECTORBORD

VII TERMINALS

IX EXPERIMENTERS KITS

XI CASES & PLUG-IN UNITS

V CASES & PLUG-IN UNITS

IV PLUGBORDS

V CASES & PLUG-INS

V CASES & PLUG-INS

V CASES & PLUG-IN UNITS

IV PLUGBORDS

V CASES & PLUG-INS

IX EXPERIMENTERS KITS

IV PLUGBORDS

IV PLUGBORDS

II VECTORBORD

IV PLUGBORDS

IV PLUGBORDS

IV PLUGBORDS

IX EXPERIMENTERS KITS

IX EXPERIMENTERS KITS

V CASES & PLUG-IN UNITS

II VECTORBORD

IV PLUGBORDS

IV PLUGBORDS

IX EXPERIMENTERS KITS

V PLUG-IN KITS

V PLUG-IN UNITS

VII TERMINALS

IV PLUGBORDS

IV PLUGBORDS

II VECTORBORD

XIV TURRETS

XIII PATCHBOARDS

X MOUNTING HDWR.

XIII PATCHBOARDS

IV PLUGBORDS

V CASES & PLUG-IN UNITS

V CASES & PLUG-IN UNITS

V CASES & PLUG-INS

II VECTORBORD

IV PLUGBORDS

IX EXPERIMENTERS KITS

XIV TURRETS

XI ADAPTERS

X MOUNTING HDWR.

X MOUNTING HDWR.

XIV TURRETS

VII TERMINALS

VII TERMINALS

IX EXPERIMENTERS KITS

VII TERMINALS

X MOUNTING HDWR.

IX EXPERIMENTERS KITS

XIV TURRETS

XIV TURRETS

XIV TURRETS

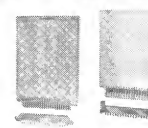
IX EXPERIMENTERS KITS

SECTIONS

For quick location open catalog to black edge markings opposite desired section



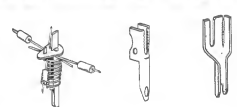
II VECTORBORDS



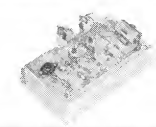
IV PLUGBORDS



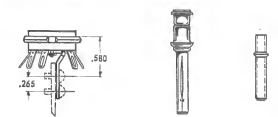
V CASES & PLUG-INS



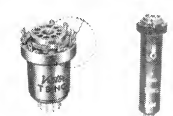
VII TERMINALS



IX EXPERIMENTER'S KITS



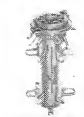
X MOUNTING HARDWARE



XI ADAPTERS



XIII PATCHBOARDS



XIV TURRETS

PRICES

Vector

VECTORBORD

SECTION II
PAGE 1
ISSUE 54-11*for experimental and
production work*

Vectorbord *

PRE-PUNCHED INSULATING BOARDS

Vectorbord provides a convenient and economical method for assembling circuit components in both experimental and production units.

ECONOMICAL

Pre-punched Vectorbord cuts costs by eliminating most if not all, time consuming board drilling operations. Convenient, ready to use Vectorbord makes it possible to get to actual assembly at once.

VERSATILE

Offered in a wide range of sizes, a variety of materials and a selection of pre-punched hole patterns, Vectorbord is suited for a wide range of requirements. In addition to the standard boards listed on pages 3 and 4 of this section, special patterns and sizes may be ordered from the factory (see page 2).

Each of the standard grid patterns shown is available in 1/16" thick panels. Patterns "A" and "C" are available in 3/32" XXXP Phenolic and Epoxy Paper panels. Pattern "H" is supplied only in 1/16" Epoxy Glass, as most other materials crack at such close hole spacing.

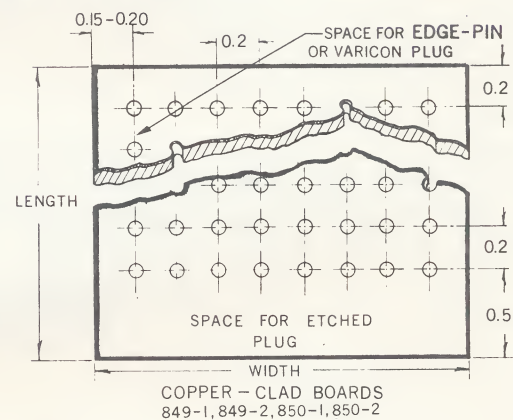
Vectorbord accepts eyelets, standard turned or Vector Push-in terminals as well as self tap screws for attaching necessary hardware. .093" holes accept #4 self-tap screws (#2 or #3 for clearance); .062" holes accept #2 self-tap screws (#0 for clearance).

APPLICATIONS

Vectorbord is recommended for both experimental work where pre-punching enables changes to be made freely and for many production jobs where production time can be greatly reduced by employing pre-punched Vectorbord.

Pattern "A" is recommended for general experimental work using Vector T9.4 or T9.6 Push-in terminals or solderless T30 Springclips. .093" holes in this pattern are spaced on a .265" grid. For circuits using transistors, pattern "E" with .062" holes on .014" centers, is the same as "G" except oriented at 45° to the borders. Pattern "F" has .062" holes on .02" centers. Transistor leads can be passed directly down thru the holes so that the transistor cover rests flat on the board where patterns "E" and "G" are used. Pattern "H" with .062" holes on .01" center provides maximum component density. For additional patterns see tables on pages 3 & 4.

*TRADEMARK



COPPER-CLAD VECTORBORD

Economical Copper-Clad Vectorbord is ideal for making etched circuits. This convenient laminated board is available with 2 ounce copper (.003") on one or both sides. It can be obtained in 1/16" Epoxy Glass, Epoxy Paper or XXXP Phenolic in "F" or "G" patterns or without pre-punched holes. While the "F" pattern is considered best for etching by providing sufficient space for lines of the copper, the "G" pattern having 1/16" holes on alternate centers of a 0.1" grid is also stocked. Other hole patterns can be supplied in copper-clad on special order at moderate set-up charge.

Pre-punched boards in the 3" x 4½" and 4½" x 6½" sizes are especially useful since borders are able to accommodate etching of plug contacts at one end. Holes on the other end are correctly positioned so that either Vector Edge-Pin .040" pins or Elco Varicon connectors can be quickly mounted. (See Section IV for these accessories)

When making printed circuits, thin masking tapes may be quickly applied to the Vectorbord where copper lines are desired. Also available from Vector is a new product, Vectoresist, a "rub-on" etch resist transfer sheet. This exceptionally easy method of making neat, clean, etched circuits is offered in sheets combining lines, circles, ellipses, pads, solid areas and standard 0.156" spaced plug contact transfers to match P.C. receptacles. Simple application is made by rubbing desired figures onto Copper-Clad Vectorbord. (See Section IX for details). Vector 27X Etched Circuit Kit provides all necessary materials to make etched circuit boards. (See Section IX for details).

VECTORBORD

MATERIALS

Natural Phenolic - Type: PBE-P, Grade XXXP per Mil P-3115B. The most economical and popular member of the Vectorbord family. Furnished as standard unless otherwise specified. Available in 3/32" or 1/16" thickness (Patterns B,E,F & G - 1/16" only). A cold punching type, maximum operating temperature is 250° F. Color is tan.

Epoxy Paper - Type: PEE, Grade EXXXP per Mil P-22324. Recommended when strength as well as economy is a factor. Available in 3/32" or 1/16" thickness (Patterns B,E,F & G - 1/16" only). A cold punching type, maximum operating temperature is 250° F. Color is ivory.

Epoxy Glass - Type: GEE, Grade G-10 per Mil P-18177. A desirable material where maximum tensile and shear strength, higher maximum temperature, minimum moisture absorption, and higher insulation resistance are required. Available in 1/32" and 1/16" thickness. Maximum operating temperature is 300° F.

Glass Silicone - Type: GSG, Grade G-7 per Mil P-997B. An excellent board where high temperature is a factor plus the qualities described in the previous paragraph are required. Available in 1/16" thickness only. For use at temperatures up to 450° F. Color is white.

Natural Phenolic - Copper-Clad - Type: PP, Grade XXXP per Mil P-13949B. Supplied with 2 oz. (.003) copper-clad on 1 or 2 sides. Available in 1/16" thickness. Phenolic is the most economical material.

Epoxy Glass - Copper-Clad - Type: FL-GE, Grade G-10 per Mil P-13949C. Supplied with 2 oz. (.003") copper-clad on 1 or 2 sides. Ideal for making top quality etched circuits.

UNPUNCHED VECTORBORD

Small unpunched pieces of Vectorbord are offered in "off-the-shelf" sizes as listed. To drill special hole layouts, a piece of pre-punched Vectorbord or Vector layout paper can be used as a template.

TOLERANCES

Pitch - $\pm 0.007''$ per inch
1/16" thickness - $\pm 0.008''$
3/32" thickness - $\pm 0.01''$

Ordering information for standard Vectorbord may be found on the following pages.

ACCESSORIES

TERMINALS

A complete line of terminals is available from Vector including Solderless, Push-in and Turned type. These will be found in Section VII.

LAYOUT PAPER

Grid paper is available for most of the hole patterns. With this the circuit may be planned in advance and when laid over the board, grid paper facilitates placement of components.

SPECIAL SIZES & PATTERNS

Special sizes and hole layouts can be made to order if one of the standard catalog items does not meet requirements. All patterns except "G" and "H" are punched a single row at a time so that spacing can be changed in one direction if special applications so require. Spacing can be further modified by removing punches to eliminate rows of holes in the other direction. The press feed may be set at 0.1", 0.146", 0.156", 0.188", 0.2", 0.25", 0.265" or their multipliers.

Special sizes of Vectorbord not listed on the tables on pages 3 and 4 can usually be cut to order from large sheets (moderate set-up charge). When ordering sawed boards, customers should allow standard borders and tolerances as follows: with patterns "A" and "C", allow 0.13" to 0.15" from edge to centerline of holes; for all other patterns allow .093" to 0.125". With patterns "G" & "H" a smooth edge cannot be obtained in sawing boards from large ones because of the closeness of the holes. The sawed edges will normally pass through the center line of one row of holes producing a scalloped edge.

When ordering special size boards the following MAXIMUM BOARD WIDTHS apply:

Patterns "A" & "F" in phenolic, Epoxy paper or glass laminates: 20"
Patterns "B", "C", & "E" all materials: 6"
Pattern "G" in phenolic and Epoxy paper: 20"
Patterns "G" & "H" in Epoxy glass: 10"

Unless specified otherwise above, the maximum length for glass silicone and Epoxy glass is 34½" and for all other materials is 38"

SPECIAL DRILLED PANELS

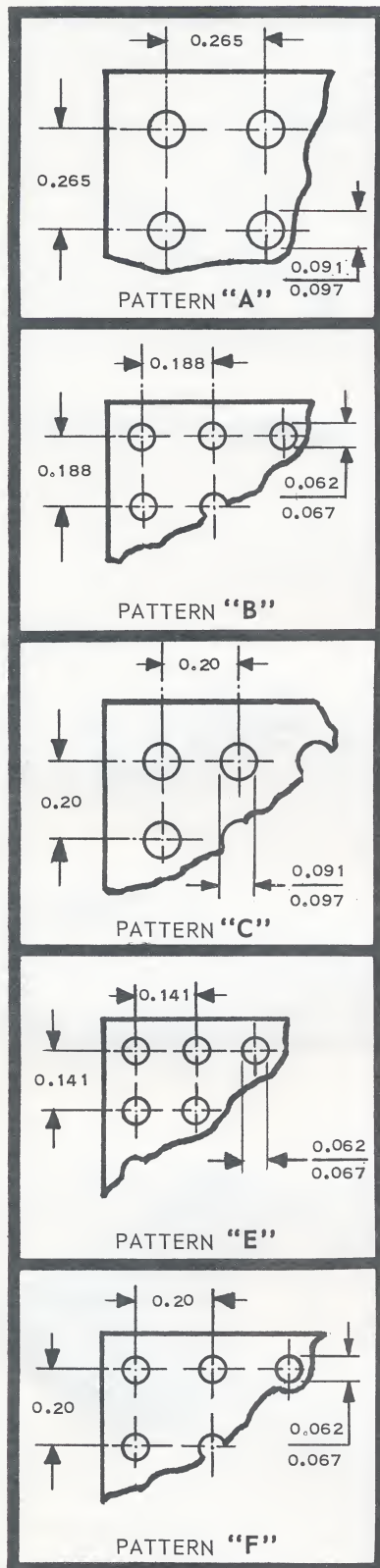
Special drilled panels can be made at low cost on production type drilling machines where the punched types described are not suitable. (A moderate drill template charge is made). Use of Vectorbord for prototypes, followed by Vector production drilled boards (etched if desired) with only the desired holes present, can be highly efficient and economical. Quotations on request.

GRID PAPER ORDERING INFORMATION

Catalog No.	Size	Pattern
R173A-1	8½" x 17"	A
R173A	8½" x 11"	A
R173F	8½" x 11"	F
R173G	8½" x 11"	G
R173H	8½" x 11"	H

Supports - Aluminum, wood or pin style supports are available. (See Section IX for full details).

PRE-PUNCHED INSULATING BOARDS PATTERNS. A, B, C, E, F.



PATTERN	MATERIAL	CAT. NO.	LENGTH	WIDTH	THICK.	NO. OF HOLES
A	XXXX PHENOLIC	18A18	4.80	4.80	1/16	18 X 18
		32A3	8.51	.82	1/16	32 X 3
		32A9	8.51	2.41	1/16	32 X 9
		32A18	8.51	4.80	1/16	32 X 18
		64A18	16.99	4.80	1/16	64 X 18
		72A33	19.11	8.77	1/16	72 X 33
		32AA5	8.51	1.35	3/32	32 X 5
		32AA7	8.51	1.88	3/32	32 X 7
		32AA9	8.51	2.41	3/32	32 X 9
		32AA18	8.51	4.80	3/32	32 X 18
		32AA32	8.51	8.51	3/32	32 X 32
		64AA18	16.99	4.80	3/32	64 X 18
		64AA32	16.99	8.51	3/32	64 X 32
		64AA132	35.01	16.99	3/32	64 X 132
	EPOXY-PAPER	7AA5EP	1.88	1.35	3/32	7 X 5
		11AA7EP	2.94	1.88	3/32	11 X 7
		18AA18EP	4.80	4.80	3/32	18 X 18
		32AA7EP	8.51	1.88	3/32	32 X 7
		32AA18EP	8.51	4.80	3/32	32 X 18
		32AA32EP	8.51	8.51	3/32	32 X 32
		64AA18EP	16.99	4.80	3/32	64 X 18
		64AA32EP	16.99	8.51	3/32	64 X 32
	EPOXY-GLASS	32A18WE	8.51	4.80	1/16	32 X 18
		64A18WE	16.99	4.80	1/16	64 X 18
		64A32WE	16.99	8.51	1/16	64 X 32
	GLASS SILICONE	64A18W	16.99	4.80	1/16	64 X 18
B	XXXX PHENOLIC	45B30	8.51	5.69	1/16	45 X 30
		90B30	16.97	5.69	1/16	89 OR 90 X 30
C	XXXX PHENOLIC	85C24 *	16.99	4.80	1/16	85 X 23
E	EPOXY-PAPER	120E33EP	17.00	4.80	1/16	120 X 33
	EPOXY-GLASS	120E33WE	17.00	4.80	1/16	120 X 33
F	EPOXY-PAPER	85F24EP *	16.99	4.80	1/16	85 X 23
		85F42EP *	16.99	8.51	1/16	85 X 42
	EPOXY-GLASS	175F99WE	35.00	20.00	1/16	175 X 99
	COPPER-CLAD					
	XXXX PHENOLIC COPPER-CLAD 1 SIDE	3106-1 XXXP **	4 1/2	3	1/16	18 X 14
		3070-1 XXXP **	6 1/2	4 1/2	1/16	28 X 22
		42F22 C1	4.5	8.51	1/16	42 X 22
	XXXX PHENOLIC COPPER-CLAD 2 SIDES	3106-2 XXXP **	4 1/2	3	1/16	18 X 14
		3070-2 XXXP **	6 1/2	4 1/2	1/16	28 X 22
		42F22 C2	4.5	8.51	1/16	42 X 22
	EPOXY-PAPER COPPER-CLAD 1 SIDE	3070-1 EP **	6 1/2	4 1/2	1/16	28 X 22
		3106-1 EP **	4.5	3	1/16	18 X 14
	EPOXY-PAPER COPPER-CLAD 2 SIDES	3070-2 EP **	6 1/2	4 1/2	1/16	28 X 22
		3106-2EP **	4 1/2	3	1/16	18 X 14
	EPOXY-GLASS COPPER-CLAD 1 SIDE	3106-1 WE **	4 1/2	3	1/16	18 X 14
		3070-1 WE **	6 1/2	4 1/2	1/16	28 X 22
		85F42 WEC1	16.99	8.51	1/16	85 X 42
		42F22 WEC1	8 1/2	4 1/2	1/16	42 X 22
		3106-2 WE *	4 1/2	3	1/16	18 X 14
	EPOXY-GLASS COPPER-CLAD 2 SIDES	3070-2 WE **	6 1/2	4 1/2	1/16	28 X 22
		85F42 WEC2	16.99	8.51	1/16	85 X 42
		42F22 WEC2	8 1/2	4 1/2	1/16	42 X 22

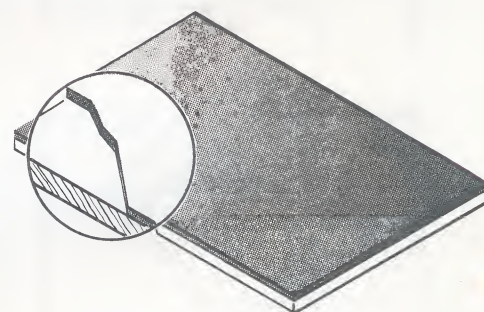
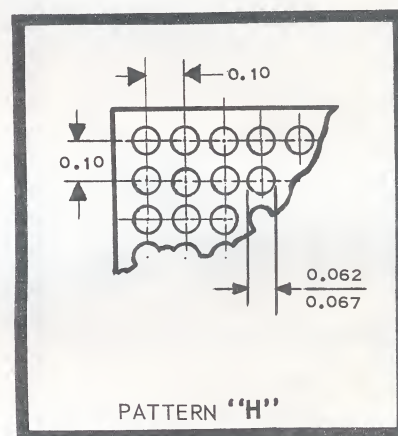
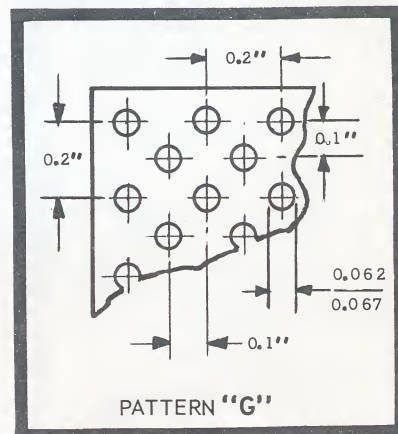
* Irregular Borders.

** Space for Etched Plug on one side.

PRE-PUNCHED INSULATING BOARDS

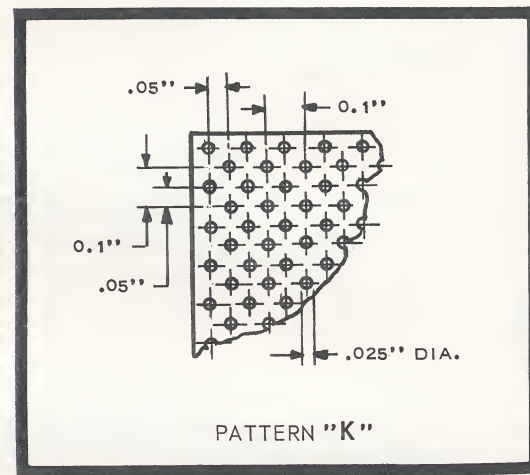
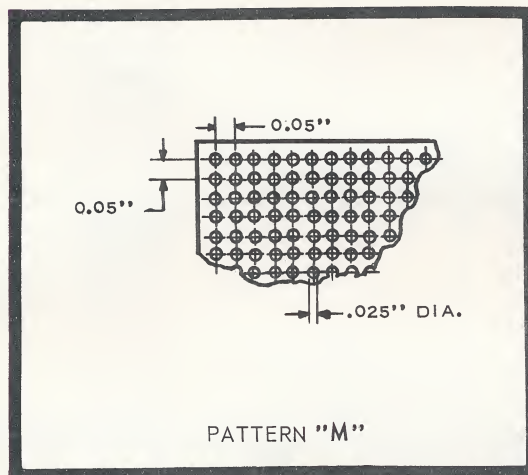
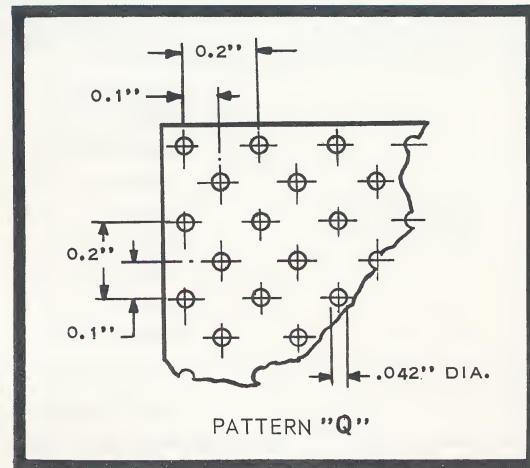
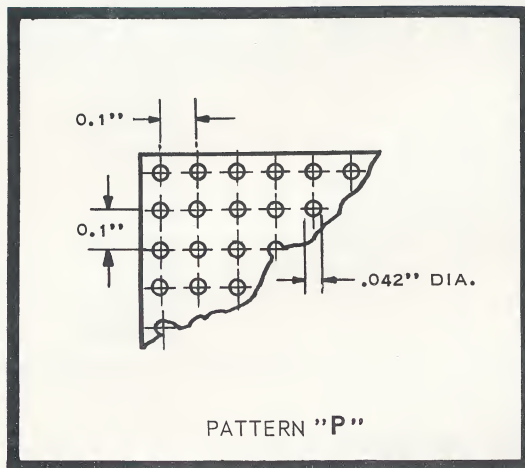
PATTERNS "G", "H" AND UNPUNCHED

CAT. NO.	LGTH.	WIDTH	THICK.	NO. OF HOLES	MATERIAL	PATTERN	
42G24*	8.51	4.80	1/16"	(42X23)X2	XXXX Phenolic	G	
42G42*	8.51	8.51	1/16"	(42X2)X(42&41)			
85G24*	16.99	4.80	1/16"	(85X24)X2			
85G42*	16.99	8.51	1/16"	(85X2)X(42&41)			
95G43	19.00	8.60	1/16"	(95X43)X2			
95G87	19.00	17.40	1/16"	(95X86)X2			
95G175	19.00	35.00	1/16"	(95X175)X2			
42G24EP*	8.51	4.80	1/16"	(42X23)X2	Epoxy-Paper		
42G42EP*	8.51	8.51	1/16"	(42X2)X(42&41)			
85G24EP*	16.99	4.80	1/16"	(85X23)X2			
85G42EP*	16.99	8.51	1/16"	(85X2)X(42&41)			
42G24WE*	8.51	4.80	1/16"	(42X23)X2	Epoxy-Glass		
42G24WE/.032	8.51	4.80	1/32"	(42X23)X2			
42G42WE*	8.51	8.51	1/16"	(42X2)X(42&41)			
85G24WE*	16.99	4.80	1/16"	(85X23)X2			
85G42WE*	16.99	8.51	1/16"	(85X2)X(42&41)			
85G24W	16.99	4.80	1/16"	(85X23)X2	Glass Silicone		
COPPER-CLAD							
42G22WEC1	8 1/2	4 1/2	1/16"	(42X22)X2	Epoxy-Glass Copper-Clad 1 Side		
42G22WEC2	8 1/2	4 1/2	1/16"	(42X22)X2	Epoxy-Glass Copper-Clad 2 Sides		
170H48WE/032	17.00	4.80	1/32"	47 X 169	Epoxy-Glass	H	
17/8.5XXXXP	17.00	8 1/2	3/32"		XXXX Phenolic	UNPUNCHED	
17/4.8WE	17.00	4.8	1/16"		Epoxy-Glass		
COPPER-CLAD							
CU45/30-1	4 1/2	3	1/16"		XXXX Phenolic Copper-Clad 1 Side		
CU65/45-1	6 1/2	4 1/2	1/16"				
CU85/45-1	8 1/2	4 1/2	1/16"				
CU45/30-2	4 1/2	3	1/16"		XXXX Phenolic Copper-Clad 2 Sides		
CU65/45-2	6 1/2	4 1/2	1/16"				
CU85/45-2	8 1/2	4 1/2	1/16"				
CU45/30WE-1	4 1/2	3	1/16"		Epoxy-Glass Copper-Clad 1 Side		
CU65/45WE-1	6 1/2	4 1/2	1/16"				
CU85/45WE-1	8 1/2	4 1/2	1/16"				
CU45/30WE-2	4 1/2	3	1/16"		Epoxy-Glass Copper-Clad 2 Sides		
CU65/45WE-2	6 1/2	4 1/2	1/16"				
CU85/45WE-2	8 1/2	4 1/2	1/16"				



COPPER-CLAD
BOARD (UNPUNCHED)

* Irregular Borders.



MICRO VECTORBORD

Micro pattern VECTORBORD is pre-punched insulating board with an overall grid of small closely spaced holes designed for use with micro-miniature modules or other small components. With these small patterns, the user can achieve higher component density than previously available with pre-punched boards.

The hole sizes and grid pattern arrangements are available as follows:

- Pattern "P" ----- .042" dia. holes on 0.1" grid
- Pattern "Q" ----- .042" dia. holes on 0.1" / 0.2" grid
- Pattern "M" ----- .025" dia. holes on 0.50" grid
- Pattern "K" ----- .025" dia. holes on .05" / 0.1" grid

MICRO-VECTORBORD is especially useful in making cord-wood modules. Small plug-in circuit cords with edge mounted plug elements can also be quickly made, using available connectors.

Board material unclad and 2 oz. copper clad epoxy-glass Type: GEE, Grade G-10 per Mil P-18177 Thickness offered range from 1/64" to 3/64" as indicated in table. Other special sizes and hole arrangements are available on order -- consult factory.



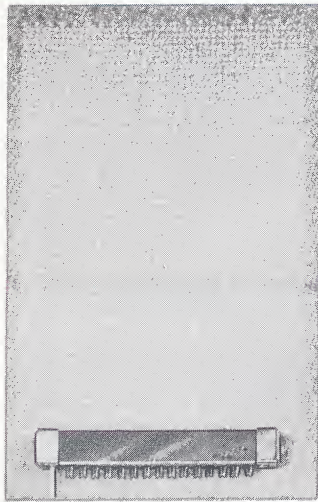
PATTERN MATERIAL	CATALOG NO.	L	W	THK.	NO. OF HOLES
P Epoxy-glass .042" Dia. Holes	59P19/032	6"	2"	1/32"	59x19
	59P44/032	6"	4 1/2"	1/32"	59x44
	169P59/032	17"	6"	1/32"	169x59
	59P19/016*	6"	2"	1/64"	59x19
	59P44/016*	6"	4 1/2"	1/64"	59x44
	169P59/016	17"	6"	1/64"	169x59
	59P19/047*	6"	2"	3/64"	59x19
	59P44/047*	6"	4 1/2"	3/64"	59x44
	169P59/047*	17"	6"	3/64"	169x59
Epoxy-glass Copper-Clad, 1 Side 0.042" dia. Holes - Pattern "P"	169P59/032C1	17"	6"	1/32"	169x59
Q Epoxy-glass .042" Dia. Holes	29Q9/032	6"	2"	1/32"	29x9x2
	29Q22/032	6"	4 1/2"	1/32"	29x22x2
	84Q29/032	17"	6"	1/32"	84x29x2
	29Q9/016*	6"	2"	1/64"	29x9x2
	29Q22/016*	6"	4 1/2"	1/64"	29x22x2
	84Q29/016	17"	6"	1/64"	84x29x2
	29Q9/047*	6"	2"	3/64"	29x9x2
	29Q22/047*	6"	4 1/2"	3/64"	29x22x2
	84Q29/047*	17"	6"	3/64"	84x29x2
M Epoxy-glass .025" Dia. Holes	76M38/032	4"	2"	1/32"	76x38
	126M76/032	6 1/2"	4"	1/32"	126x76
	166M76/032	8 1/2"	4"	1/32"	166x76
	336M76/032	17"	4"	1/32"	336x76
	76M38/016	4"	2"	1/64"	76x38
	126M76/016*	6 1/2"	4"	1/64"	126x76
	166M76/016*	8 1/2"	4"	1/64"	166x76
	336M76/016	17"	4"	1/64"	336x76
Epoxy-glass Copper-Clad, 1 Side 0.025" dia. Holes - Pattern "M"	336M76/032C1	17"	4"	1/32"	336x76
K Epoxy-glass .025" Dia. Holes	38K19/032	4"	2"	1/32"	38x19 x2
	63K38/032	6 1/2"	4"	1/32"	63x38 x2
	83K38/032	8 1/2"	4"	1/32"	83x38 x2
	168K38/032	17"	4"	1/32"	168x38 x2
	38K19/016*	4"	2"	1/64"	38x19 x2
	63K38/016*	6 1/2"	4"	1/64"	63x38 x2
	83K33/016*	8 1/2"	4"	1/64"	83x38 x2
	168K38/016	17"	4"	1/64"	168x38 x2

Border variations may change number of holes slightly.

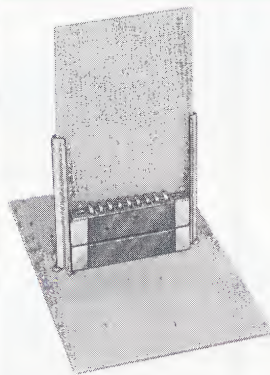
* NOT STOCKED - Can be made on special order (dies available).

EXPLANATION OF CATALOG NUMBERS

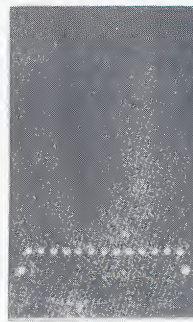
No. of Holes (Length) — 59 — P — 19 — /032C1
 Pattern of Holes Layout —
 (.042" dia. holes on 0.1" ctrs.) —
 — Copper Clad 1 side
 — Thickness of Board
 — No. of Holes (Width)



PLUGBOARD NO. 3068 WITH
PLUG R815B



PLUGBOARD, CARD GUIDES,
PLUG AND RECEPTACLE
MOUNTED ON "MOTHER"
BOARD
NO. 3060 PLUGBOARD
NO. R809A RECEPTACLE



PLUG NO. R809B

PLUGBOARD
NO. 3058

Micro PLUGBORD

New Micro plugboards make it possible to greater component density than previously possible with pre-punched boards. They can be used for mounting integrated circuit modules in test or experimental assemblies.

PLUGBORDS

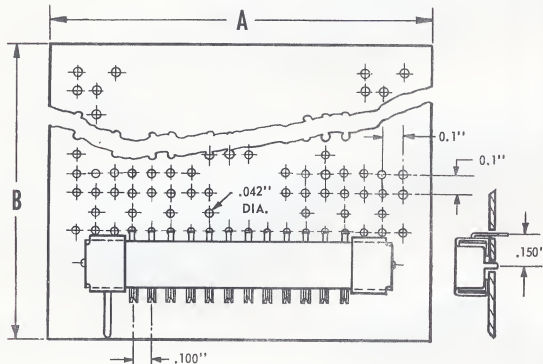
Micro plugboards are available for both printed and hand-wired circuits stock sizes ranging from 1½" x 2½" to 3" x 5" or other sizes to special order. Plugboards are available in two pre-punched hole patterns, "P" or "M" (as shown in figure) or as blank boards. Plugboards are Epoxy Glass Type GEE, Grade G-10, per Mil P-18177. Copper-Clad boards are 2 oz. (.003") copper-clad 1 side Epoxy Glass, Type FL-GE, Grade G-10, per Mil P-13949C. Boards are 1/32" thick.

Contacts are Elco Varicon Series 8129 mounted at 45° to each other and spaced on .1" centers in a diallyl phthalate block. Contact block plug has 9, 12 or 15 contacts for appropriate size boards. Plug mates hermaphroditically with receptacle, being supplied with one guide pin on one end and a hole to receive receptacle guide pin at the opposite end. Contacts are .017" thick, Grade "A" phosphor bronze, gold flash plated. Current range is 3 to 7 amperes. Plug tabs are bent at 90° angle to the board. Connections to plug tabs can be made by soldering or by welding. Pre-punched plugboards are provided with block plugs, side mounted with brackets. Blank plugboards are provided with separate block plug and brackets for side mounting. This enables user to drill holes for mounting components. Copper-clad boards can be etched.* Blank plugboards are supplied with appropriate holes for mounting plug. Plug Brackets have tabs which are slipped through the appropriate holes and bent back to hold plug securely.

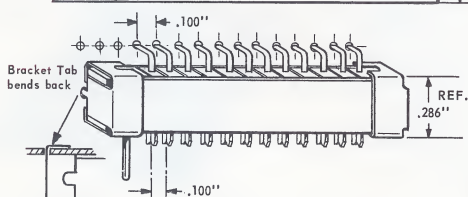
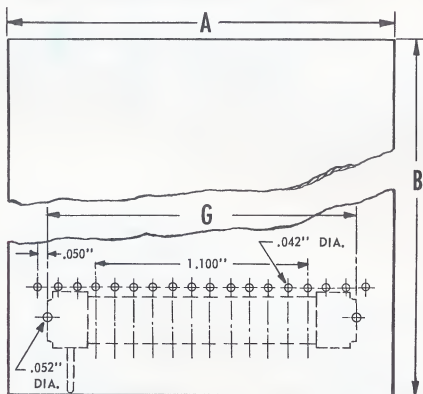
Receptacles are similar to contact block except they are provided with upright mounting brackets and the tab ends are not bent. They are designed for perpendicular mounting to a "mother" board. Receptacle guide pins mate with corresponding hole in plug. Figure on reverse side indicates hole pattern required for mounting receptacle to "mother" board. Polarization is accomplished by removal of matching contacts from plug and receptacle and inserting polarization pin in receptacle. Loss of one contact results. Two card guides are required for each board.

Card guides are available for the micro plugboards. Holes in "mother" board for attaching card guides should be drilled as shown in figure on reverse side. Guide tabs are soldered to .075 eyelets or to printed copper base if present. Material is plated brass. Two are required for each board.

*Vectoresist, rub-on resist, tapes, inks, chemical and other etch materials are available from Vector for use with these plugboards (See Section IX, pages 7 and 8)



ABOVE PATTERN "P" PLUGBOARD
.042" DIA. HOLES ON .1" GRID



BLANK PLUGBOARD WITH PLUG R812B

VECTOR ELECTRONIC CO., INC.

1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

TWX 213-240-2162

Micro PLUGBORD — ORDERING INFORMATION

Micro-plugbord with pre-punched holes and mounted contact plug.

	DIMENSIONS		HOLE	NO. OF	NO. OF	MATE.
CAT. NO.	A	B	PATTERN	CONTACTS	HOLES	RECEPT.
3059	1 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	P	9	13X18	R809A
3063	2"	3"	P	12	18X23	R812A
3067	2 $\frac{1}{2}$ "	4"	P	15	23X33	R815A
3060	1 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	M	9	25X35	R809A
3064	2"	3"	M	12	35X45	R812A
3068	2 $\frac{1}{2}$ "	4"	M	15	45X65	R815A
3099	3"	5"	M	15	55X85	R815A

Micro-plugbord, blank, with separate unmounted contact plug.

3057	$1\frac{1}{2}^{\circ\circ}$	$2\frac{1}{2}^{\circ\circ}$	—	9	—	R809A
3061	$2^{\circ\circ}$	$3^{\circ\circ}$	—	12	—	R812A
3065	$2\frac{1}{2}^{\circ\circ}$	$4^{\circ\circ}$	—	15	—	R815A

Micro-plugbord, blank, copper-clad 1 side with separate unmounted contact plug.

3058	1 1/2"	2 1/2"	—	9	—	R 809A
3062	2"	3"	—	12	—	R 812A
3066	2 1/2"	4"	—	15	—	R 815A

FIG. 1 - "H" Dimension for Board Width

PLUG NO.	RECEPT. NO.	"H" DIM.	FOR BOARD WIDTH
R809B	R809A	.215	----- 1-1/2"
R812B	R812A	.315	----- 2"
R815B	R815A	.415	----- 2-1/2"
R815B	R815A	.665	----- 3"

Dimensions Plugboards and Receptacles

MICRO PLUGBORD WIDTH	USING		DIMENSIONS				
	PLUG NO.	RECEPT. NO.	C	D	E	F	G
1-1/2"	R809B	R809A	.365	1.100	.800	1.530	1.260
2"	R812B	R812A	.465	1.400	1.100	2.030	1.560
2-1/2"	R815B	R815A	.565	1.700	1.400	2.530	1.860
3"	R815B	R815A	.815	1.700	1.400	3.030	1.860

RECEPTACLES

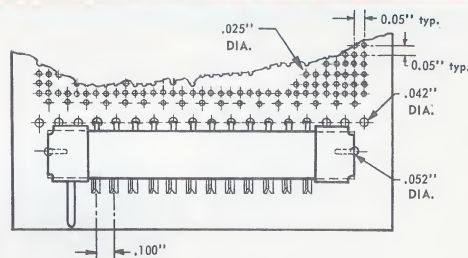
Cat. No.	Item
R809A	9 contact Receptacle for 1½" x 2½" plugboards
R812A	12 contact Receptacle for 2" x 3" plugboards
R815A	15 contact Receptacle for 2½" x 4" & 3" x 5" plugboards

CARD GUIDES and ACCESSORIES

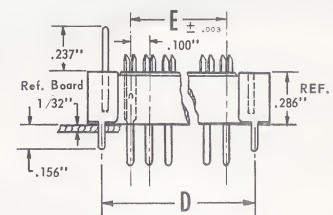
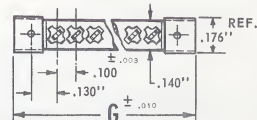
Cat. No.	Item
0077-50/4	Polarization pin, alum., clear irridite, fits above listed receptacles.
BR-15	Card Guide, fits all above listed plugboards (with 3 mounting eyelets)

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TWX 213-240-2162



ABOVE PATTERN ⁹⁹M⁹⁹ PLUGBORD
.025⁹⁹ DIA. HOLES ON 0.05⁹⁹ GRID



RECEPTACLE FOR "MOTHER" BOARD

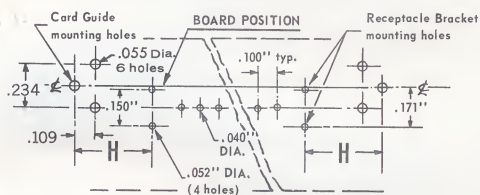
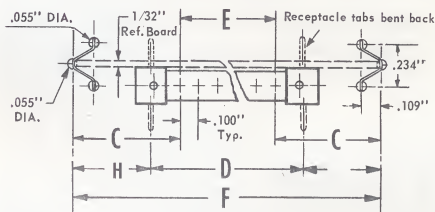
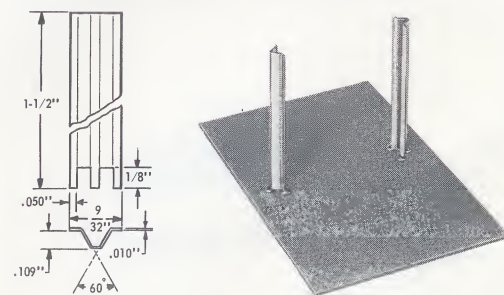


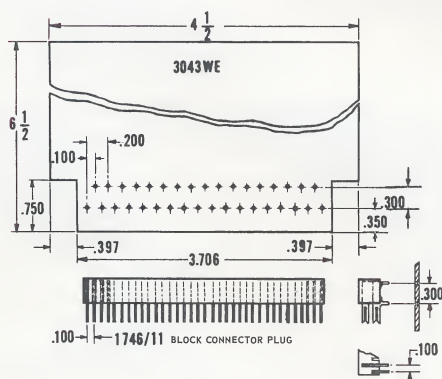
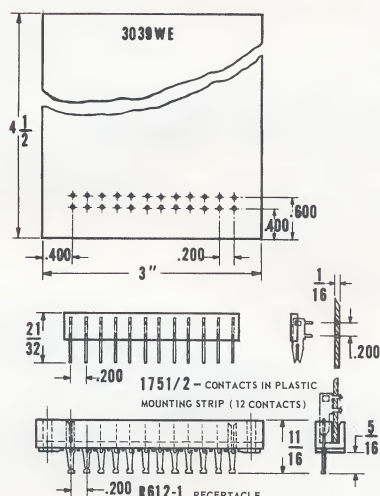
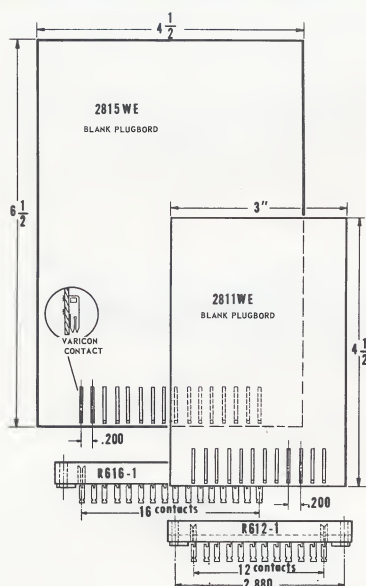
FIG. 1 "MOTHER" BOARD HOLE LAYOUT



RELATION OF RECEPTACLE TO CARD GUIDE POSITION



CARD GUIDES MOUNTED ON "MOTHER" BOARD
VECTOR ELECTRONIC CO., INC.



Vector Blank plugboards provide cut-to-size boards with provision for edge mounted connectors. Holes are provided only for plug mounting. The user drills terminal or component mounting holes or, if copper-clad, etches and then mounts edge connectors. (See also pages 9 to 12, Section IV) Plugboards fit Elco Varipak Circuit Card Cages which are listed for each board. (See also Bulletin 85 in Section IV).

FOUR TYPES OF BLANK PLUGBOARD ARE AVAILABLE:

Epoxy Glass Plugboards With Attached Contacts facilitate quick assembly of hand wired units. Boards are furnished with attached Elco Varicon, Series 5200 contacts which mate with open-end type receptacles as listed below. Contacts are staked along one short side of the plugboard. Contacts are further described on the reverse page. Boards are Epoxy Glass, 1/16" thick, Type GEE, Grade G-10, per Mil. P-18177.

Cat. No.	Board	Mating Recept.	Appl. Card Cage Set
2811WE	3"x4 1/2"/12 contacts	R612-1	3033 cage + 3035 strips
2815WE	4 1/2"x6 1/2"/16 contacts	R616-1	3032 cage + 3035 strips

Copper-Clad Plugboards Perforated For Elco Varicon Contacts, have 2 oz. copper on one side and mounting holes for user installation of single or strip type Elco Varicon contacts. For prototypes, use of Vector "Do-it-yourself" Etch Circuit materials save time. (See Pg. 8, Section IX). After etching, contacts are inserted into unclad side. Tips may be soldered to copper for retention or staked with P128 press staking tool and then soldered. Boards are 1/16" thick and have 2 oz. (.003") copper-clad 1 side, Type FL-GE, Grade G-10, per Mil P-13949C. Paired .052" holes are spaced 0.2" to accept series 5200 Elco Varicon contacts. Furnished with or without unmounted contacts.

Cat. No.	Board	For No. Of Contacts	Mating Recept.	Appl. Card Cage Set
3039WE	3"x4 1/2" & cont. strip	12	R612-1	3033 cage + 3035 strips
3040WE	3"x4 1/2" board only	12	R612-1	3033 cage + 3035 strips
3041WE	4 1/2"x6 1/2" & cont. strip	16	R616-1	3032 cage + 3035 strips
3042WE	4 1/2"x6 1/2" board only	16	R616-1	3032 cage + 3035 strips

Copper-Clad Plugboard Perforated For 35 Contact, Double Tiered Molded Varicon Plug. These boards have similar specifications to the above copper-clad boards except they provide more mounting holes and special notched ends to accept Elco Series 7022 all molded double tier Miniature Varicon Connector plugs. The advantage of this plug is that the individual contacts are firmly held and need only be soldered, not staked, to copper. Double tier provides a total of 35 contacts, 0.1" spaced. Perforation in board provides .052" holes on 2 rows in a staggered pattern. (See fig. for dimension). Furnished with or without unmounted connector plug. Board is notched per fig. Receptacles have molded-on card guides.

Cat. No.	Board	Mating Recept.	Appl. Card Cage Set
3043WE	4 1/2"x6 1/2" with plug	R635	3032 cage + 3034 strips
3044WE	4 1/2"x6 1/2" without plug	R635	3032 cage + 3034 strips

Copper-Clad Plugboards, Notched For Printed Circuit Receptacles. Corners are notched to accept R644 or R624 printed Circuit receptacles or their equivalent. R644 receptacle for 4½"x6½" size boards has 44 independent or 22 dual contacts on 0.156" centers. R624 receptacle for 3"x4½" size boards has 24 independent or 12 dual contacts on 0.156" centers. For prototypes the "Do-it-yourself" etch materials are very useful. (See Page 8, Section IX). The standard plug contact pattern from the VECTORESIST sheet may be used with either board and is simply rubbed on the notched end of the board. Boards are 2 oz. (.003") copper-clad (1 or 2 sides) Epoxy Glass, Type FL-GE, Grade G-10 per Mil P-13949C. Dimensions are as shown. Plug tab pattern is centered on the board width.

Cat. No.	Board	Mating Recept.	Appl. Card Cage Set
3047WE	4½"x6½" clad 1 side	R644	3032 cage +3034 strips
3048WE	4½"x6½" clad 2 sides	R644	3032 cage +3034 strips
3045WE	3"x4½" clad 1 side	R624	3033 cage +3034 strips
3046WE	3"x4½" clad 2 sides	R624	3033 cage +3034 strips

Elco Varicon Contacts, Contact Strips & Molded Connector Plugs. Contacts are available individually or in tandem strips. They may be pressed easily into holes in 3039WE, 3040WE, 3041WE & 3042WE copper-clad plugboards. Copper pattern on board solders directly to contact or wires can be soldered using the rectangular opening at the end of each contact. Contacts in plastic strips are spaced 0.2". Plastic strip may be removed after contacts are staked or soldered in board by applying heat to the plastic. (Soldering iron, hot plate, or similar device may be used). After heating, plastic can easily be pulled away leaving contacts in place. Contacts are phosphor Bronze per QQ-B750, Grade A; nickel plated 30-150 micro inches; gold flash- ed 10-20 micro inches.

Molded Block Varicon Edge Plugs are double tiered and fit hole pattern in 3043WE & 3044WE copper-clad plugboards. Contacts should be soldered to copper-clad side of board. Molded body provides precise spacing resulting in optimum mating for low contact resistance and long life. Contacts are same specifications as above.

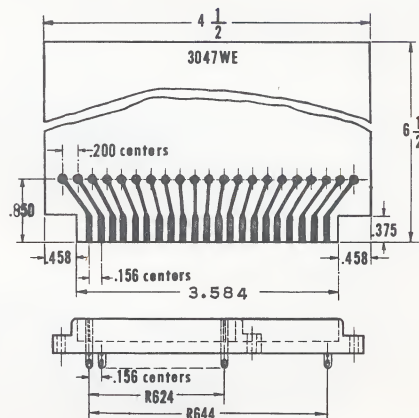
Cat. No.	Description
1753A/12	Individual Elco Varicon (Series 5200) contacts/bag 50
1751/2	12 Elco Varicon contacts in plastic mounting strip
1751/4	16 Elco Varicon contacts in plastic mounting strip
P128	Staking tool for staking above contacts to boards (for use in arbor or drill press)
1746/11	Molded Block Varicon edge plugs, double tier, Series 7022 (35 contacts)

Block Receptacles - For Plugboards With Varicon Contacts. Insulation material is molded Diallyl Phthalate, glass filled, per Mil-M-14F, Type SDG. Contact material is phosphor bronze per QQ-B-750, Grade A, nickel plated - gold flashed.

Cat. No.	Description
R612-1	Receptacle/12 contact for 3"x4½" board
R616-1	Receptacle/16 contact for 4½"x6½" board

1100 Flower St. Glendale, Calif. 91201 Area-213 Phone 245-8971

Ty 213-240-2102



(Connector pattern from Vectoresist R322 can be applied by user as illustrated)

Block Receptacles-For Plugboards With Molded Varicon Double Tier Edge Plugs. Fits 4½"x6½" notched printed circuit plugboard with double tier connector plugs. Has molded-on card guides 35 contacts. Materials are same as above receptacles.

Cat. No.	Description
R635	Receptacle/35 Varicon contact

Block Receptacles - For Printed Circuit Plugboards With Etched Contacts. Dual Side Contacts are for use with 1 or 2 sided copper clad boards. Also may have front and back sides multiplied for reliability. Available in two sizes: 44 contacts (22 single side) for 4½"x6½" boards, 24 contacts (12 single side) for 3"x4½" boards. Insulating material: molded glass filled Diallyl Phthalate. Contacts are phosphor bronze, Sel. Rex.00003"gold flash.

Cat. No.	Description
R644	Receptacle/44 contact
R624	Receptacle/24 contact

For receptacles listed above, polarization is accomplished by (1) insertion of plastic polarization keys in receptacles and (2) by providing, on the board, an appropriately spaced "cut-out" to accommodate the key. When used, 0077/50/3 key reduces the usable contact positions by one. 0077/50/1 key and 0077/50/2 key may be inserted without loss of contact.

Cat. No.	Description
0077/50/1	Polar. Key for R612-1, R616-1
0077/50/2	Polar. Key for R635
0077/50/3	Polar. Key for R624, R644

VECTOR ELECTRONIC CO., INC.



812 PLUGBOARD LAYOUT

CUT CONSTRUCTION DELAY

Save Time, Save Work, Save Money with these ready-to-wire plugboards. Ideal for making manually wired prototypes which can later be made as etched or welded circuits. For short production runs, hand wired boards (soldered or welded) can often be made faster and less expensively than etched boards. All boards shown except "F" and "C" pattern have overall grid of precision punched 1/16" diameter holes on alternate intersections of a 0.1" grid, pattern "G" for optimum mounting of JEDEC type transistors, terminals, eyelets, or component leads. "F" pattern boards have 1/16" holes located on .2" centers and "C" pattern boards have .093" holes on .2" grid. For general use epoxy paper boards will meet most requirements and may be punched, sawed or drilled if desired. Epoxy glass boards listed are better where environmental tests may be run, or where additional strength or better insulation is required.

CIRCUIT LAYOUT

Layout paper with 10 squares per inch or Vector grid paper R173-G which exactly duplicates the "G" pattern plugboard grid may be used for the initial layout. After the graph paper circuit layout is completed, Vector T28 MINI-KLIP push-in terminals, T15.23 eyelets, or other turned terminals (Sec. VII, pg. 4) are located as required. The Elco Varicon contacts which are staked to eyelets on the bottom edge of the plugboard provide terminations for the various circuit elements. Leads may be easily soldered to these using the rectangular hole. Bare tinned copper wire may be used for inter-component connections to eliminate wire stripping. When using bare wire, all cross-overs are accomplished by components crossing conductors. Circuit changes are easily made because the component bodies and leads may be readily moved. The foregoing method makes the wired circuit topologically identical to a printed circuit bearing conductors only on one side. Also makes the circuit easy to trace for testing and servicing.

PLUGBOARD USE

For breadboarding purpose, the plugboards are adequately supported by the receptacle. For mounting in equipment the Elco VARIPAK card cage has card guides and provisions for mounting the receptacles, and the entire assembly may be mounted in a standard relay rack. For customer convenience Vector stocks the Elco VARIPAK II 3032 card cage and guides for 1/16" thick circuit boards. Guides snap in at any one of 82 positions in the cage. Two 3/4" wide strips for mounting the receptacles are provided with each VARIPAK. VARIPAK accommodates boards 4 1/2" wide and up to 8 1/2" long. See Section IV, pages 15 and 16.

Cat. No.	Board Material	Hole Pattern	Dimensions			Contacts Installed	Eyelets* Installed	Receptacle†
			G	F	D			
812	Epoxy-Paper	G	4.5	6.5	3.	16	32	R616-1
812A	Epoxy-Paper	G	4.5	6.5	—	None	32	—
812B	Epoxy-Paper	G	4.5	6.5	—	None	None	—
812WE	Epoxy-Glass	G	4.5	6.5	3.	16	32	R616-1
837	Epoxy-Paper	G	3.	4.5	2.2	12	24	R612-1
837A	Epoxy-Paper	G	3.	4.5	—	None	24	—
837B	Epoxy-Paper	G	3.	4.5	—	None	None	—
837F	Epoxy-Paper	F	3.	4.5	2.2	12	24	R612-1
837WE	Epoxy-Glass	G	3.	4.5	2.2	12	24	R612-1
847	Epoxy-Paper	G	3.	4.5	2.6	14	28	R614
847A	Epoxy-Paper	G	3.	4.5	—	None	28	—
847B	Epoxy-Paper	G	3.	4.5	—	None	None	—
918	Epoxy-Glass G Pattern		4.5	8.5	3.8	20	40	R620
Copper	1 side see ill. pg. 10A							
927	Epoxy-Paper	G	4.5	3.	3.8	20	40	R620
927A	Epoxy-Paper	G	4.5	3.	—	None	40	—
927B	Epoxy-Paper	G	4.5	3.	—	None	None	—
2292	Epoxy-Paper	G	3.	8.	2.2	12	24	R612-1
2292A	Epoxy-Paper	G	3.	8.	—	None	24	—
2292B	Epoxy-Paper	G	3.	8.	—	None	None	—

Any board available in Epoxy-Glass by adding "WE" to Cat. No.

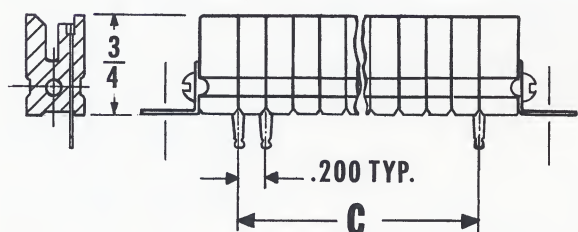
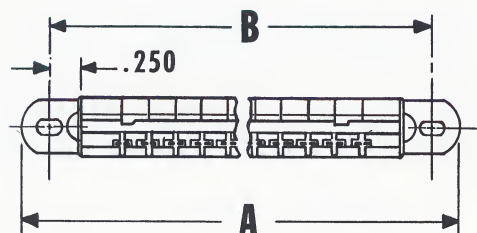
Special sizes and configurations available to order.

* Eyelets are installed at contact positions to receive contacts.

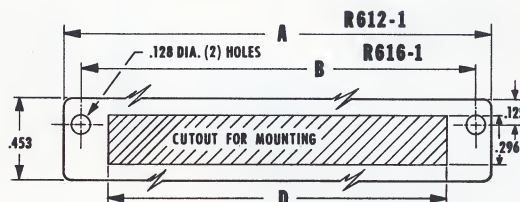
Complete Material Specifications on Sect. IV, Page 7.

† See Section IV, Page 6 for receptacle mounting data.

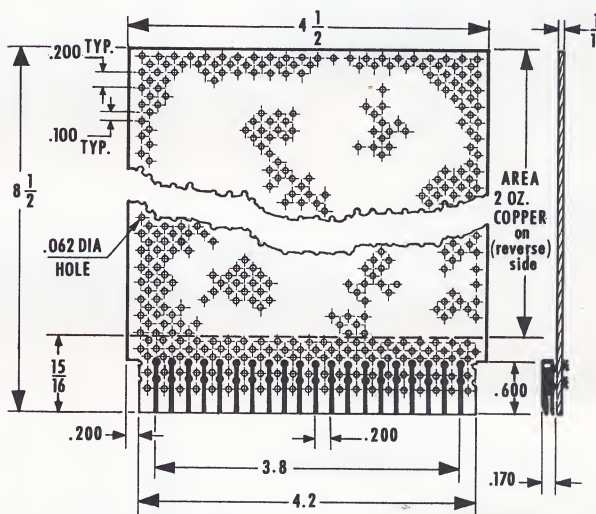
RECEPTACLE MOUNTING DATA



CAT. NO.	A	B	C
R612	3.675	3.300	2.200
R614	4.075	3.700	2.600
R616	4.475	4.100	3.000
R618	4.875	4.500	3.400
R620	5.275	4.900	3.800



CAT. NO.	A	B	D
R612-1	3.150	2.880	2.437
R616-1	3.950	3.680	3.234



918 PLUGBORD (Special)

ORDERING INFORMATION

Cat. No.	Board Material	Hole Pattern	Dimensions							Contacts Installed		Eyelets* Installed	Receptacles
			A	B	C	D	E	F	G	Upper	Lower		
848WE	Epoxy-Glass	G	3.706	.397	.750	3.4	.397	6.5	4.5	17	18	70	R635
848AWE	Epoxy-Glass	G	3.706	.397	.750	3.4	.397	6.5	4.5	None	None	70	—
848BWE	Epoxy-Glas	G	3.706	.397	.750	—	.397	6.5	4.5	None	None	None	—
2436	Epoxy-Paper	G	3.6	.450	.750	3.4	.450	6.5	4.5	17	18	70	7001-Type
2436A	Epoxy-Paper	G	3.6	.450	.750	3.4	.450	6.5	4.5	None	None	70	—
2436B	Epoxy-Paper	G	3.6	.450	.750	—	.450	6.5	4.5	None	None	None	—
2309B	Epoxy-Paper	G	3.	1.7	.750	2.8	1.8	4.45	6.5	14	15	58	7001-Type
2309C	Epoxy-Paper	G	4.2	1.1	.750	4.	1.2	4.45	6.5	20	21	82	7001-Type
2536WE	Epoxy-Glass	C	3.7	.400	.750	3.4	.400	6.5	4.5	17	18	70	R635
2536AWE	Epoxy-Glass	C	3.7	.400	.750	3.4	.400	6.5	4.5	None	None	70	—
2536BWE	Epoxy-Glass	C	3.7	.400	.750	—	.400	6.5	4.5	None	None	None	—

* Board with eyelets in contact positions and blank boards for customers preferring to install their own contacts. Order Vector T15.22 eyelets if additional eyelets required. See Section VII, Page 4 for eyelets and eyelets setting tools.

Special sizes and configurations available to order.

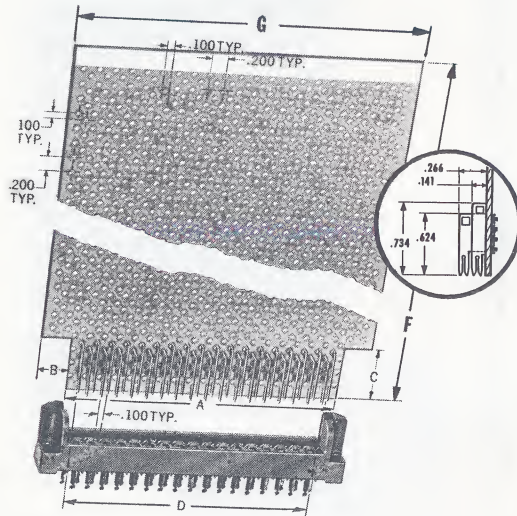
Any board available in epoxy-glass by adding "WE" to Cat. No.

For description of patterns see Section II, Page 3 & 4.

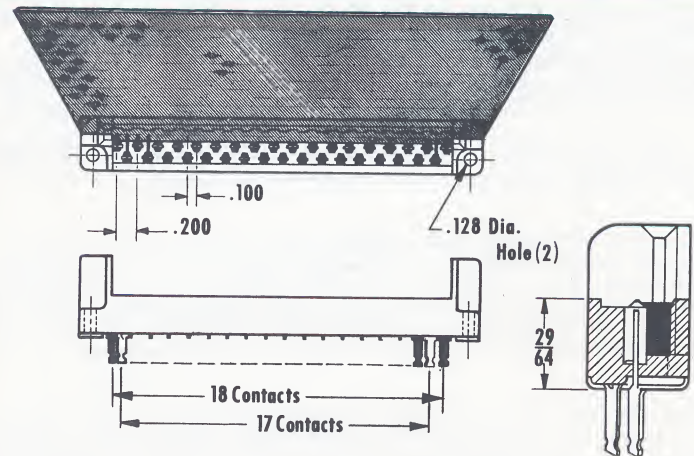
VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area-213 Phone 245-8971

TWX 213-240-2162

848 WE PLUGBORD

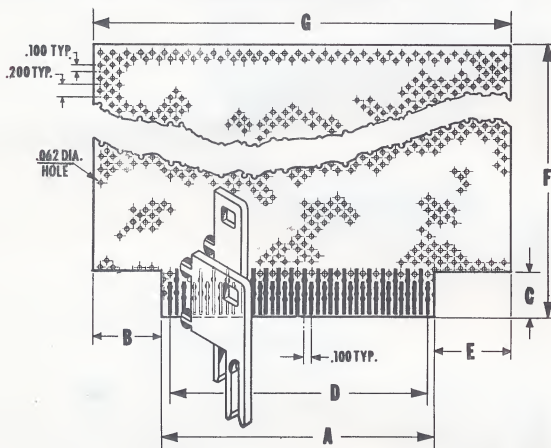
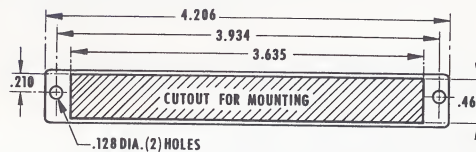


R 635 RECEPTACLE

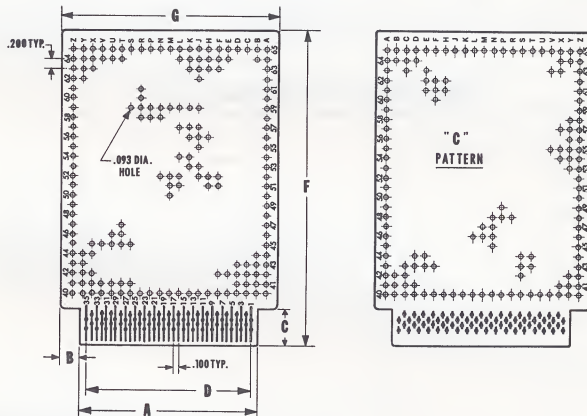


R 635 RECEPTACLE
MOUNTING DATA

PLUGBORDS



2309 PLUGBORD



2536 WE PLUGBORD

SPECIFICATIONS

EPOXY-PAPER 1/16" thick ivory color meets Mil-P-22324 type PEE, 250° max.

EPOXY-GLASS 1/16" thick greenish white, grade G10 meets Mil-P-18177 type GEE 300°F. max.

EPOXY-PAPER copper clad, 2 oz. 1/16" thick ivory color, meets Mil-P-13949 type PX, 250° max.

EPOXY-GLASS copper clad 2 oz. 1/16" thick greenish white, meets Mil-P-13949B type FL-GE, 300° F. max.

HOLE PATTERN "G" pattern .062" dia. holes on alternate 0.1" ctrs. "F" pattern .062" dia. holes on 0.2" ctrs. "C" pattern .093" dia. holes on 0.2" ctrs.

CONTACTS (use on boards and receptacles) phosphor bronze, per QQ-P-330, grade A, nickel plated .0002", gold flash-.000015" to .000020".

RECEPTACLES { R612-1, R616-1, R635 - Glass filled diallyl-phthalate molded.
CASTING { R612, R614, R616, R618, R620 - Mica-filled phenolic (MFE) segmented.

CARD CAGE Aluminum, supplied with two receptacle mounting straps. Fits standard 19" relay rack accommodates cards 4-1/2" wide, up to 8-1/2" long, ELCO type 3032

GUIDES Snap-in polycarbonate for 1/16" board slotted.

The P.C. Plugbord has all the advantages of Vector Plugbord as described in Section IV, Pages 5, 6 and 7.

The major difference in the Vector P.C. Plugbord is the 2 oz. copper contact strip etched on the leading edge of the board. This permits using the P.C. Plugbord in many existing circuit receptacles.

The individual etched contacts are on .156" center and are .090" wide on the 838PWE board and .072" wide on all others.

Vector P.C. Plugbord 838, A&PWE will fit the most frequently used standard printed circuit receptacles such as Elco, Amphenol and Cinch types. For customer convenience Vector stocks double readout type printed circuit receptacles as their number R644. These receptacles have 44 independent contacts (total 43 usable) in two rows and will accommodate all P.C. type Plugbords listed below.

On the 838PWE Plugbord additional etched copper pads and lines are provided around certain holes to facilitate soldering in component lead as shown in the figure. The triangular pad pattern is especially useful for transistor leads since hole spacing matches JEDEC standard (all holes are 1/16" dia. on alternate intersections of a 0.1" grid.)

The circuit layout and P.C. Plugbord use is performed in the same manner as described in Section IV, Pages 5, 6 and 7.

For best connections to the individual etched contacts, it is suggested that a terminal be mounted in the hole around which is 1/8" dia. "pad" at the end of the contact strip. It is also suggested that when soldering a component lead to this terminal the solder be allowed to flow onto the copper pad to make good contact with the contact strip. Terminals available for this use are T28, T18 & T15.23 eyelets.

ORDERING INFORMATION

CATALOG NO.	DESCRIPTION
838 PLUGBORD *	4.5" X 6.5" - 43 ETCHED CONTACTS, TOTAL TWO SIDES.
838A PLUGBORD *	4.5" X 6.5" - 22-2 OZ. ETCHED CONTACTS, ONE SIDE.
838AWE PLUGBORD *	4.5" X 6.5" - 22-2 OZ. ETCHED CONTACTS, ONE SIDE.
838WE PLUGBORD *	4.5" X 6.5" - 43-2 OZ. ETCHED CONTACTS, TOTAL TWO SIDES.
838PWE PLUGBORD *	4.5" X 6.5" - 22-2 OZ. CONTACTS AND ETCHED PAD LAYOUT ONE SIDE.
838C PLUGBORD	4.5" X 6.5" - 2 OZ. OVERALL COPPER ONE SIDE WITH HOLES AS 838A BUT NO PLUG PATTERN.
838D PLUGBORD	4.5" X 6.5" 2 OZ. OVERALL COPPER BOTH SIDES WITH HOLES AS 838 BUT NO PLUG PATTERN.

* ORDER R644 RECEPTACLE FOR ABOVE PLUGBORDS, HAS 44 INDEPENDENT CONTACTS IN TWO ROWS ON .156" CENTERS.

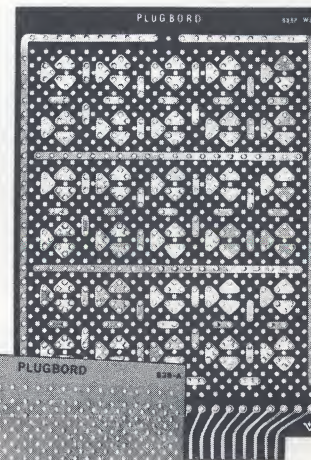
VARIATIONS

For Epoxy - Glass Board add - WE after catalog number.
For 1/16" holes on 0.2" X 0.2" Grid add F to catalog number.
Special sizes to order.

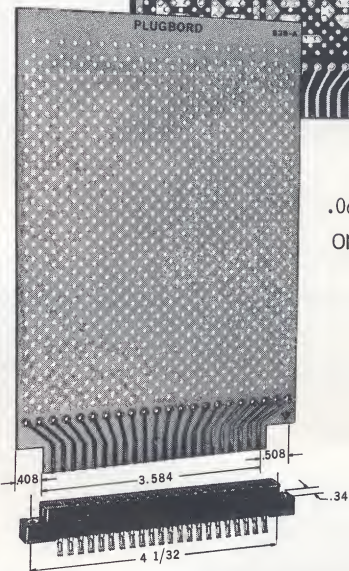
ACCESSORIES

CAT. NO.	DESCRIPTION
T-28 T-18 T15.23	PUSH - IN TERMINAL (SEE SECT. VII, PAGE 3) FORKED TURNED TERMINAL (SEC. VII, PAGES 5 & 6) EYELETS - 1/16" BARREL X 3/32" LENGTH UNDER HEAD.
R173-G	0.1" GRID LAYOUT PAPER - 50 SHEETS PER PAD.

838 PWE



838 A



.062" DIA. HOLES
ON ALT. 0.1" CTRS.

R 644 RECEPTACLE

SPECIFICATIONS

BOARD

838, 838A - 1/16" Epoxy-Paper, Grade EXXXP per MIL-P-22324.

838AWE, 838WE, 838PWE - 1/16" Epoxy-Glass Type: GEE, Grade G-10 per MIL-P-18177.

838C, 838D - 1/16" Epoxy-Paper W-2 oz. copper clad meets MIL-P-13949 type PX.

CONTACTS

Material is 2 oz. Copper. The standard P.C. Plugbords shown above are coated with a water dip lacquer to prevent the copper contacts from tarnishing. Lacquer may be easily removed with lacquer thinner. Special plating of the copper contacts can be provided to order.

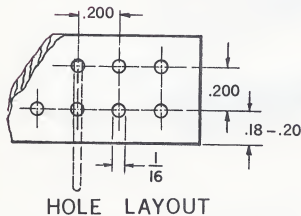
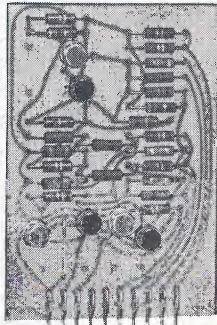
RECEPTACLE

Insulator Material : Glass filled Diallyl Phthalate Bifurcated. Contacts: Phosphor bronze Sel-Rex Gold finish .00003 min.

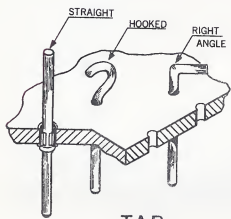


EDGE-PIN K 23A

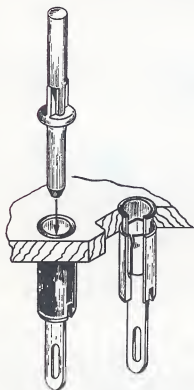
EDGEBOARD



HOLE LAYOUT



TAB TREATMENT

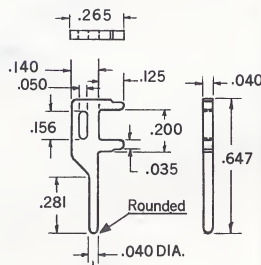


CUP RECEPTACLE

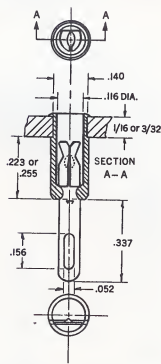
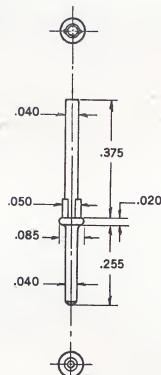


INSTALLING TOOL

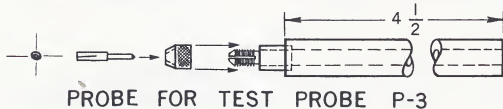
EDGE-PIN K 23A



INBORD-PIN K 24A



CUP RECEPTACLE R23



PROBE FOR TEST PROBE P-3

UNIQUE ROUND PINS FOR CARD ATTACHMENT

Vector EDGE-PIN and INBORD Plug Pins mount easily where needed on circuit cards. They provide .040" dia. round pins which fit either standard block receptacles or Vector individual cup receptacles to match even irregular pin spacings. The plug pins can be soldered to printed circuit patterns or to wires. The EDGE-PIN Plug Pin projects longitudinally about 1/4" beyond card edge. Two mounting fingers 0.2" apart pass through two 1/16" holes and are crimped over on reverse side (see figure). The INBORD Plug Pin projects perpendicularly to the board plane from a single hole anywhere on the board.

EDGE-PINS are stamped from .040" half hard brass stock. The pin portion is accurately rounded to .040" diameter with the remaining portion flat. Pins may be spaced 0.1" minimum; 0.156" or 0.2" is better. The recommended hole layout is shown in the figure.

EDGE-PINS are of half hard brass per MIL-B-50B. Plating is .003" nickel plus gold flash to MIL-QQ-N-290, Class I, Type 6. Cadmium Plating also offered.

A CRIMPING TOOL IS AVAILABLE to hand stake the mounting fingers of the EDGE-PIN also a production tool which stakes several pins at once. (Send for data.)

ORDERING INFORMATION

CAT. NO.	FOR BOARD THKNS.	PLATING	STD. PKG.
K23A	1/16"	Nickel Pltd. & Gold Flash	50
K23C	1/16"	Cadmium Pltd.	50
K25	3/32" to 1/8"	Nickel Pltd. & Gold Flash	50
K25C	3/32" to 1/8"	Cadmium Pltd.	50
P93	ALL	Hand Staking Tool	1
P118-1	ALL	Air Opr. Production Staking Tool.	1

INBORD PLUG PINS ATTACH ANYWHERE TO BOARDS

INBORD Plug Pins (.040" dia.) are cold formed brass having projections around the shaft adjacent to a flange (see figure). The knurled portion, when pressed into a tight hole, cuts in and prevents rotation while also holding firmly. The tip of the pin is rounded for easy entry. After mounting in a .038" dia. hole, the emergent end may be bent over at 90° or hooked for easier connection of wires (see figure), or the INBORD Pins press tightly into 1/16" O.D. staked in eyelets. Solder on the emergent end of the pin will prevent any pull-out even if end is not bent over.

INBORD Pins make excellent test points when used with Vector P3 female type probe. Probe tips which fits standard probe chucks are also listed below. Being much smaller and more economical than conventional test points, INBORD Pins can be used to greater advantage. For optimum position, the points can be readily bent in the direction best suited for the probe. If both ends of the point are not needed, either end can be snipped off as desired.

INBORD PIN material is phosphor bronze, Grade A, alloy 351 per MIL-B-892 .0003" nickel plate plus gold flash to MIL Specs. Cadmium plating also listed. A 1/8" diameter punch with hole in center to pass the body of the pin is used to install. May also be used to bend pin.

ORDERING INFORMATION

Cat. No.	Plating	Std. Pkg.	Cat. No.	Description
K24A	Nickel + Gold Fl.	50	P3	Female Probe with Handle
K24C	Cadmium	50		To Fit .040" Pins
P-97	Installing Punch	1	P4	Tip Only as used in Above
	For Above			

VECTOR CUP RECEPTACLE

These provide high reliability press formed beryllium copper contacts "floated" in brass shells with contact tabs emerging through slots in the shell. The contacts are like those used in MIL approved miniature tube sockets. The receptacle cups may be staked into 0.140" dia. holes anywhere on boards 1/16" or 3/32" thick. Staking tools are listed.

EDGE-PIN and INBORD Plug Pins or any round .040" dia. pins fit correctly. Cup spacing should be not less than 0.2". A special staking anvil for the 0.2" spacing is listed giving greater clearance between edges than the standard anvil. Maximum recommended current through contacts is 1.0 amperes.

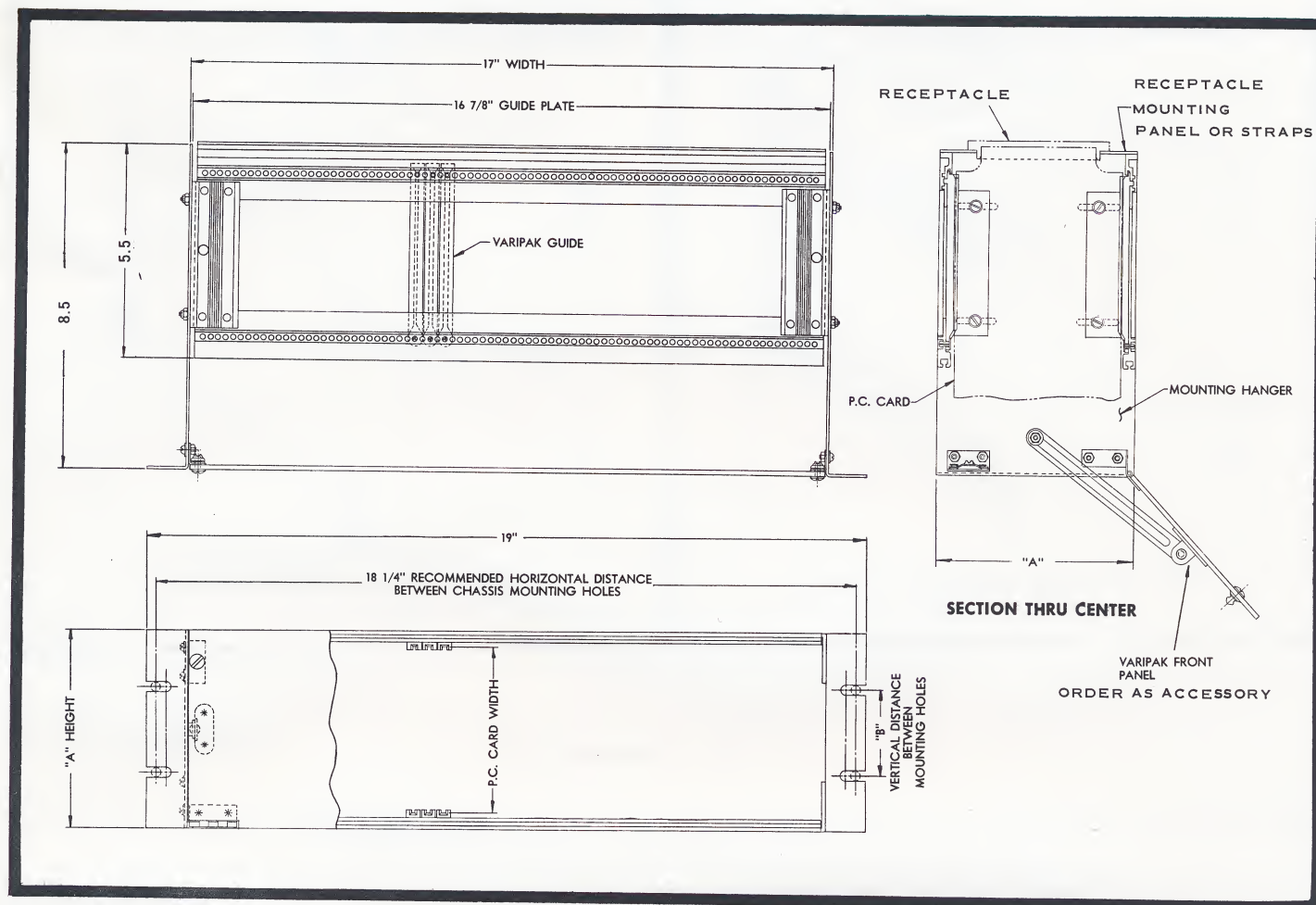
ORDERING INFORMATION

Cat. No.	Purpose	NOTE: Staking & Holding Tools have 1/2" dia. body for use in arbor or drill press.
R23	For 1/16" thick panel	
R24	For 3/32" thick panel	
P-95	Staking Tool 'A' - Gen. Use - Uniform Roll	
P-95A	Staking Tool 'B' - For 0.2" Spacing - Oblong Roll	
P-95B	Holds Cup Receptacle while staking	

SPECIFICATIONS:

Cup-Half hard brass per MIL-C-895 with fused tin per MIL-T-10717, Type 1, fused. Contact-Beryllium Copper, 165 alloy, nickel plt. .0003" min. per QQ-N-290, Class I, Type 6, plus gold flash.

VARIPAK II



CARD CAGES

The Elco Varipak Circuit Card Cage provides an adjustable aluminum frame mountable on 19" relay racks which can accommodate up to 41 cards on .4" spacing. The BR14 snap-in plastic card guides may be mounted in any of 82 different positions in the cage guide plates and can be easily removed if necessary. Varipak Card Cages are recommended for use with Vector Plugboards having Elco Varicon plug pins, Vector Edge-Pins, printed circuit tabs or for other plugboards within the size range. Cages listed on the following page are for board widths in the 2½" to 3½" and 4" to 5" ranges. Board length may be up to 8½". For mounting receptacles, card cages require either mounting straps (available in ¾" or 1" widths) or mounting panels. Mounting panel may be readily cut-out to accept a variety of receptacles, and comes complete with holes for attaching to cage frame. Mounting straps and panels for specific Elco Varicon and Vector Edge-Pin receptacles are listed on the following page.

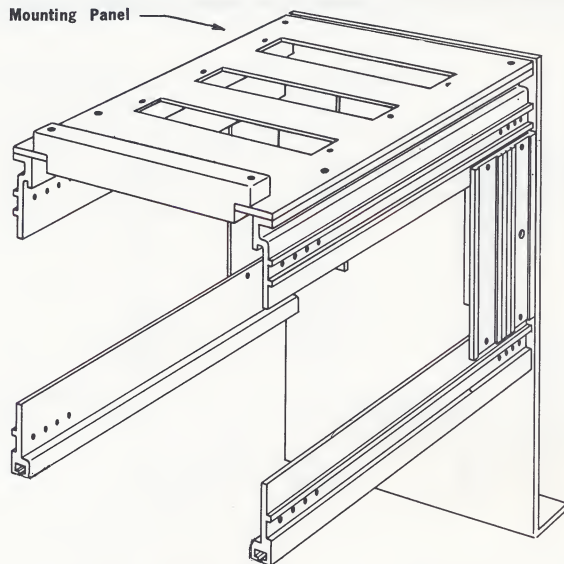
SPECIFICATIONS

Metal parts: Guide plate is extruded aluminum 6063-T6. Mounting hanger and front panel are No. 14 gauge aluminum 6061-T4.

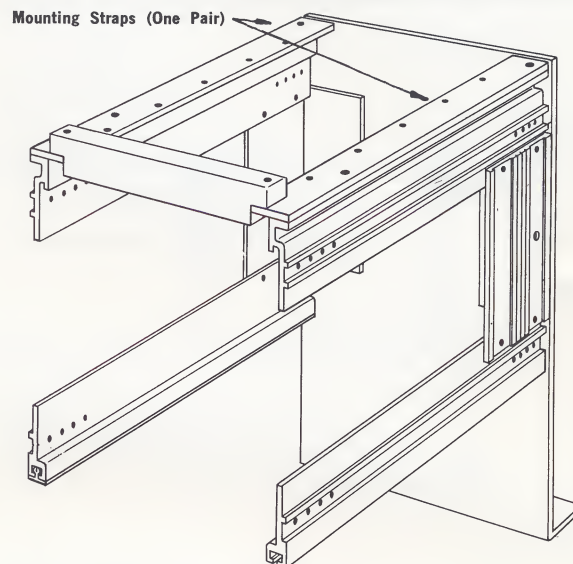
All aluminum parts have a clear anodized finish.

Card guides: Polycarbonate plastic with a maximum temperature rating of 280° to 300° F.

Dimensions are as shown in figure and in table on the following page.



VIEW SHOWING MOUNTING PANEL
WITH CUTOUTS



VIEW SHOWING STRAP TYPE
MOUNTING

ORDERING INFORMATION

Mounting straps, mounting panels, front panel, plastic card guides, hinges and hardware are not included with the card cage and must be specified by catalog number when ordering. See Accessory table below.

CAT. NO.	ITEM	DIMENSIONS		FOR BOARD WIDTH RANGE	NOTES
		A	B		
3032 *	CAGE	5.218	2.25	4" TO 5"	ORDER ACCESSORIES TO FIT RECEPTACLES AS LISTED BELOW.
3033 **	CAGE	4.343	1.375	2½" TO 3½"	

ACCESSORIES

CAT. NO.	ITEM	SIZE	FOR CAGE	MOUNTS RECEPTACLES NUMBER
3034	MOUNTING STRAPS (PAIR)	3/4" X 16.75"	3032	R 635, R 635-1, R 644
			3033	R 624
3035	MOUNTING STRAPS (PAIR)	1" X 16.75"	3032	R 614, R 616-1
			3033	R 612-1
3036	MOUNTING PANEL	5.218" X 16.75"	3032	R 320 **
3037	MOUNTING PANEL	4.343" X 16.75"	3033	R 310, R 315 **
BR 14	CARD GUIDE		ALL	
3038	FRONT PANEL WITH HINGES AND HARDWARE		3032 *	

* No front panel available for cage number 3033.

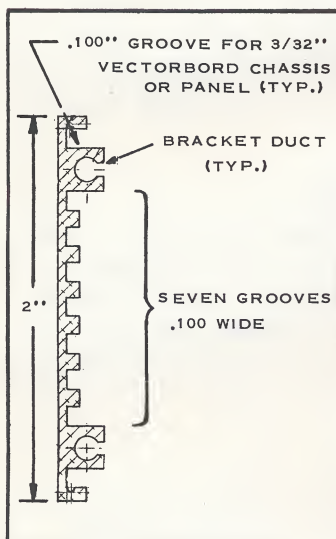
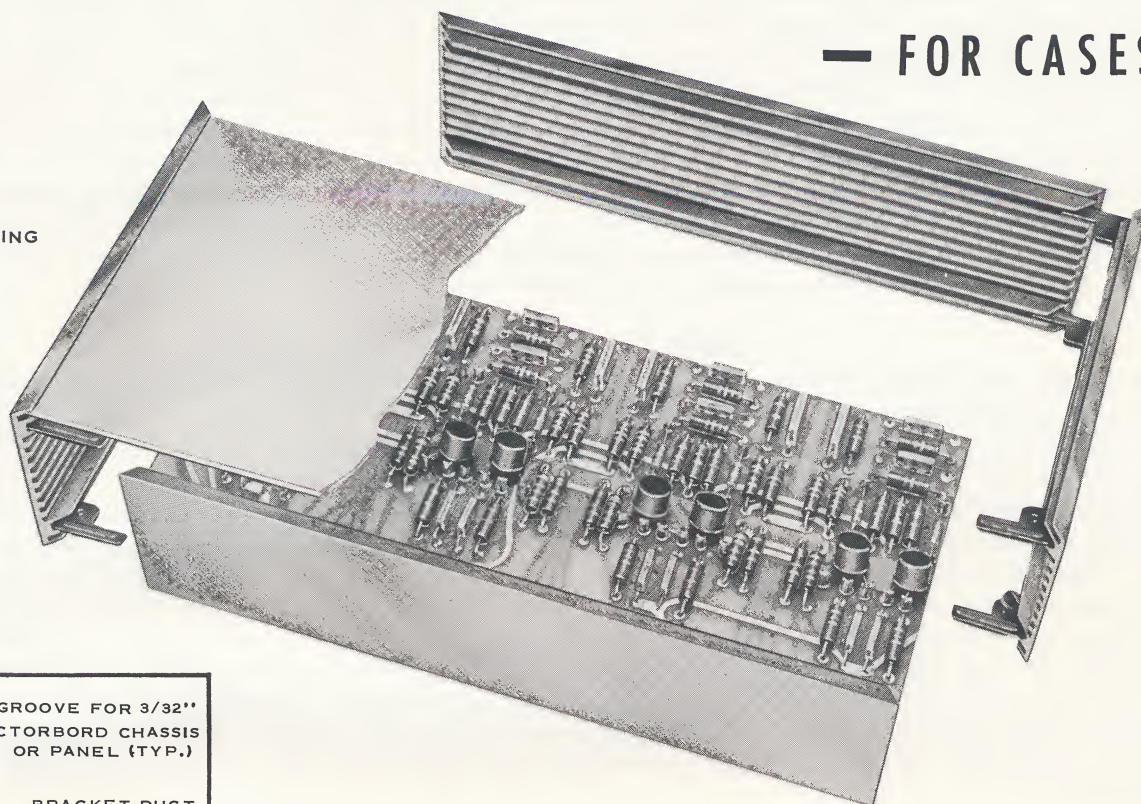
** These receptacles cannot be used with listed mounting straps. Mounting panel, however, will accept a wide variety of receptacles in the general size range, when properly perforated, including those listed for use with mounting straps.

* Formerly listed as 9016-6S and number 3100 complete with 3/4" mounting straps, and as number 3101 complete with 1" wide mounting straps.

** Formerly listed as number 3102 complete with 3/4" wide mounting straps, and as number 3103 complete with 1" wide mounting straps.

PUSH — PUSH — SLIDE-IN — FOR CASES TRIM

PAT. PENDING



Slide Boards in at top, bottom and in between or slip metal cover plate in top or bottom for complete enclosure. Frame-Loc Chassis locks tight. Then lock it up as tight as you like.

EXPANDABLE CASES QUICKLY MADE

New Vector Frame-Loc Side Rails are sleek, extruded aluminum strips which may be readily joined at ends, to form various sized rectangular chassis. The grooves provided accommodate Vectorbord or metal panels on top, bottom or in between. (see further pages for further description).

Unless otherwise noted all rails have 45° mitre cuts at each end to provide "picture frame" assembly using unique push-in CORNER BRACKETS.

Metal side plates are available for most sizes. (See separate page)

ORDERING INFORMATION

Catalog No.	Height	For 3/32" or less Panels with Max. Lgth. of:	(Pkgs. of 2 each)
SR2-3/093	2"	3"	
SR2-4.8/093	2"	4.8"	
SR2-7/093	2"	7"	
SR2-8.5/093	2"	8.5"	
SR2-10/093	2"	10"	
SR2-12/093	2"	12"	
SR2-17/093	2"	17"	
SR2-24/093*	2"	24"	

Each Cat. No. includes 2 rails, corner brackets and required screws. For example to support a 32AA18 Vectorbord, order 1 No. SR2-4.8/093 and 1 No. SR2-8.5/093.

* Ends not mitered-furnished without corner brackets.

VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

TWX 213-240-2162

A VERSATILE CASE ASSEMBLY SYSTEM

Vector Frame-Loc Chassis provide quickly assembled housings for a wide variety of electronic assemblies. Extruded aluminum side rails in many available lengths and widths may be easily plugged into each other to form varied rectangular frames enclosing circuit boards and/or metal covers. Cases so formed may be readily expanded in width, length, height, shape or stacked as needs change. The handsome metallic enclosures devoid of external screws or protuberances are also sturdy and economical. Longitudinal grooves in the side rails provide supports for circuit cards, metal panels or components at positions inside or on the outside of the case. The usual mounting brackets, holes and screws are replaced by slip-in corner brackets and slide nuts which wedge into bracket ducts in the side rails. (See illustration).

QUICK - PUSH - IN ASSEMBLY

To assemble an enclosure, the desired lengths of side rails are selected, corner brackets are pushed into the bracket ducts and the rails are pushed nearly together but separated just enough to permit the boards or metal covers to be inserted in the grooves. Then the side rails are pushed fully together at the corners. The junction so obtained is quite firm but if a more permanent joint is desired screws may be driven into the corner brackets and against the side rail ledges to clamp the assembly tightly. (See figure). Or the brackets may be crimped to the side rails by means of a center punch when permanence is desired. When locked by either of these methods the case becomes very rigid. The shape of the bracket duct in the side rail is such that #6-32 screws may be readily tapped into place (or self-tap types used). While this feature is not generally needed it is useful for attachment or removal of flat end rails, when these are preferred. Side rails are cut 1/8" longer than the panel or cover to be mounted. This provides sufficient clearance in the grooves to hold panels. (See figures).

The corner brackets used are of two pieces as shown in figure. Tightness of fit between brackets and side rails can be increased by finger bending the brackets slightly. Extruded holes in the corners of brackets are a size for use with #4 self-tap screws or clearance #2/56 screws. (See figure). Slide nuts, similar to corner brackets but with only one leg instead of two, are also shown in figure. These are for attaching panels, brackets or joining two or more cases. These can be easily inserted in bracket ducts at any time or point and slipped to required positions.

COVER PLATES TO FIT

Cover plates are available in sizes to fit many of the combinations of side rails. They are 1/8" shorter in each dimension than corresponding side rail length, to fit nicely into grooves. Bottom covers are generally placed on the outside of the rails rather than in the groove and screwed on with rubber bumpers and self-tap screws engaging the corner brackets. This is for easy access. The panels are of aluminum 1/16" thick, with natural clear finish. Vectorbord panels in a variety of hole patterns are available to fit most of the combinations of side rails. (See Section II. Pages 1-4. Where exact sizes desired are not listed one may obtain the next larger size and cut down as needed. (If saw is not available one can break most Vectorbords over a table edge along the line of holes).

For some applications the user may prefer to place the Vectorbord panel or metal cover upon the top edges of side rails rather than in grooves. For example: (1.) Where the boards are too thick to go in groove or, (2.) metal covers to be screwed on rather than slipped into grooves. (See illustration).

Patent Pending

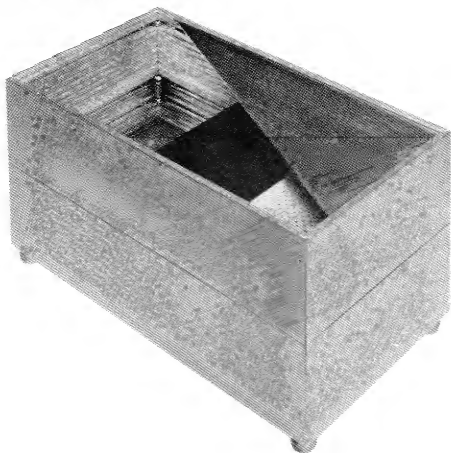
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TWX 213-240-2162

Vector

NEW PRODUCT
BULLETIN 86 SHEET 3

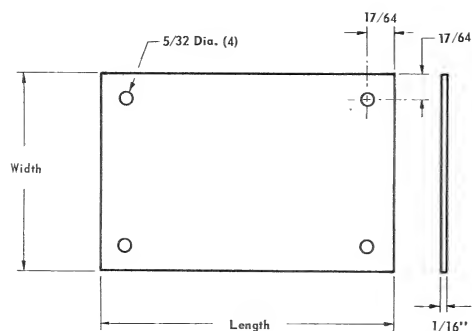
FRAME-LOC EXPANDABLE CASES TYPICAL USES



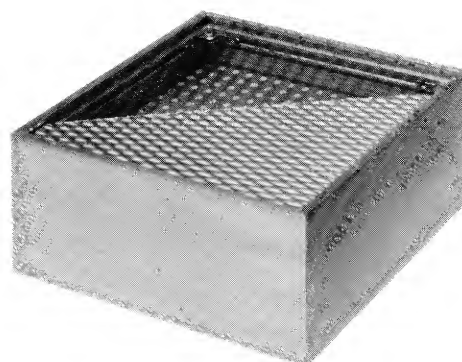
VERTICALLY STACKED CASES
WITH INSIDE MOUNTED CARDS



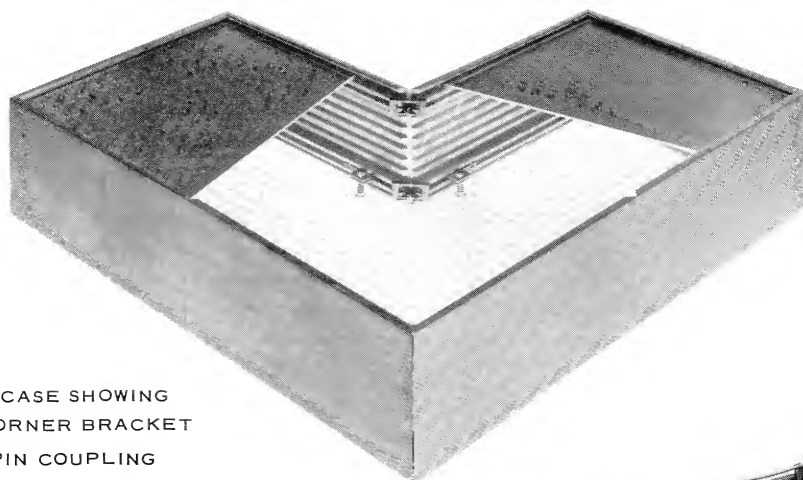
BREADBOARD CHASSIS
WITH RUBBER FEET



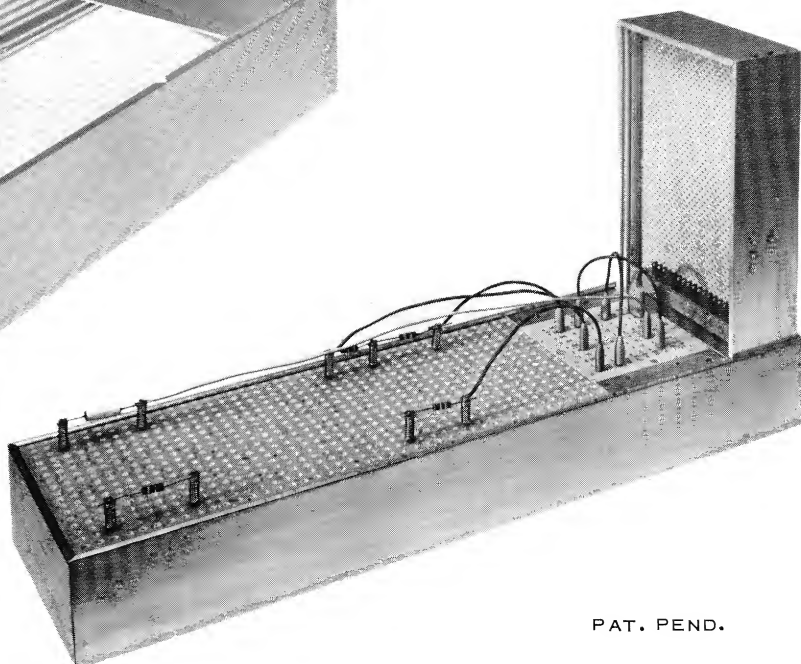
COVER PLATE



COVERED CASE
WITH CARD INSIDE



'L' SHAPED CASE SHOWING
REVERSE CORNER BRACKET
AND ROLL PIN COUPLING



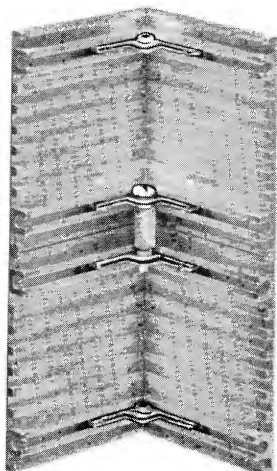
ASSEMBLY SHOWING PLUGBOARD
CASE, RIGHT ANGLE MOUNTED,
PATCHBOARD TEST SET UP ON
TEST BREADBOARD CHASSIS

PAT. PEND.

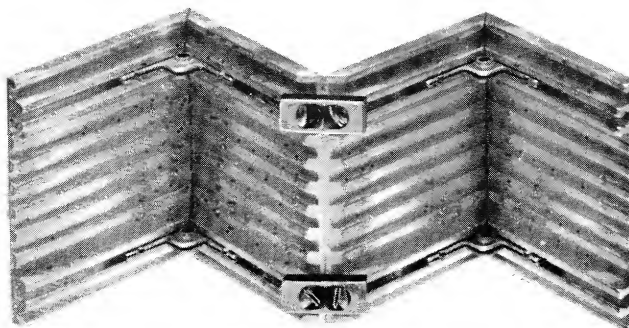
FRAME-LOC EXPANDABLE CASES
CONSTRUCTION DETAILS

NEW PRODUCT
BULLETIN 86 SHEET 4

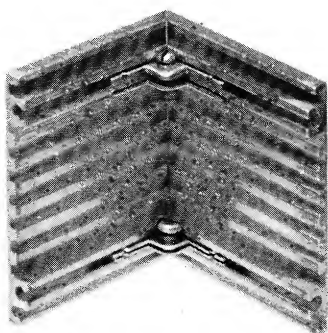
Vector



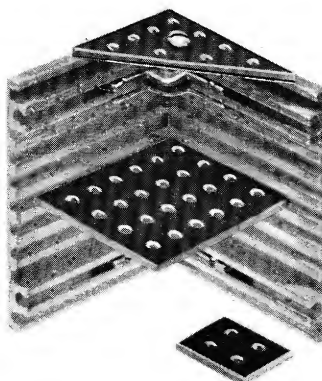
COUPLING FOR
VERTICAL STACKING



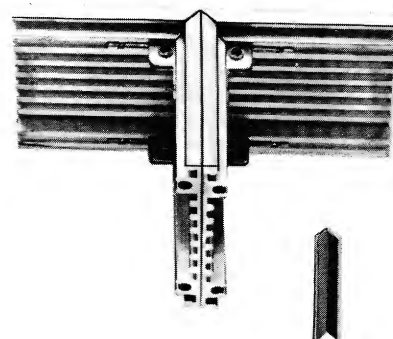
REVERSE CORNER BRACKET
FOR 'L' OR 'U' SHAPES



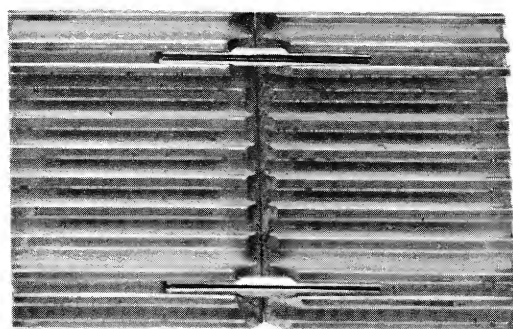
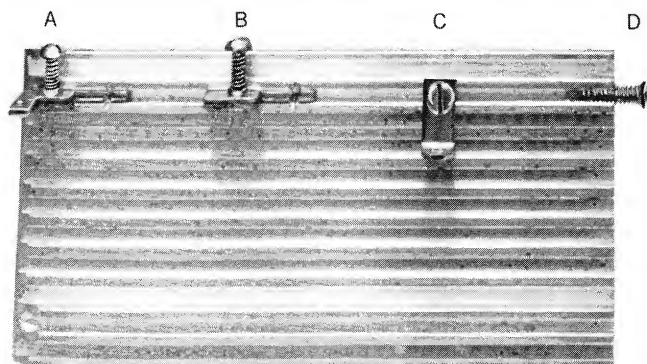
LOCKING SCREWS
FOR CORNER BRACKETS



BOARD MOUNTED ON TOP
RAIL INSTEAD OF IN GROOVE



CORNER CLIP HOLDS
2 CASES SIDE-TO-SIDE



SHOWING (A) CORNER BRACKETS; (B) SLIDE NUTS; (C) SIDE BRACKET; (D) SCREW TAPPED IN DUCT;
(E) PANEL BUSHINGS; AND (F) ROLL PINS USED TO EXTEND RAILS.

PAT. PENDING

COMPONENTS EASILY MOUNTED

Hardware is easily attached inside chassis by use of brackets and #4 self-tap screws which may be screwed into either the bracket duct slot or into the holes of corner brackets and slide nuts. Parts may also be attached to plates which slide into grooves rail to rail. These can be locked in place if necessary by indenting the rail grooves with a center punch near the extremities. Another mounting method is to use spacers and screws attached to the slide nut, per figure. To mount switches, pots, plugs or other controls on the side rails, holes can be readily drilled or punched thereon.

Mounting hardware kits are available which provide an assortment of screws, brackets and spacers. Available rubber feet can be readily mounted on the bottom by passing #4 self-tap screws thru them and thru the plate (if used) and into the corner brackets. See ordering list below.

MANY UNUSUAL CASE CONFIGURATIONS POSSIBLE

Two or more cases may be stacked along their principal axes (port to port) as shown in figure. Screws are passed between existing corner brackets, case to case with spacers between to effect the coupling. (No drilling required). Cases may also be stacked side-by-side and firmly coupled by inserting CORNER CLIPS, as shown in figure. If leads must be passed from case to case panel bushings may be used as shown. Holes would need to be drilled for the latter. The threaded panel bushings, if so used, also clamp the adjacent sides together so that the CORNER CLIP first described would not then be needed.

"L" OR "U" SHAPES AND ADD-ON

Enclosures having an "L" or "U" shape can be readily assembled using REVERSE CORNER BRACKETS shown in illustration. These are screwed on the 45° mitred ends using #6-32 small head, thread cutting screws. No special drilling or cutting is required. The standard side rail sizes should fit together properly, provided use is made of the Roll Pin Couplers shown in another figure. These can be pushed into the bracket ducts with a light hammer to join pieces in-line. Another useful combination will join two or more cases with principal axes (center lines from port to port) at right angles. (See illustration). To accomplish this one rail must have two 1/8" holes drilled or punched at positions corresponding to slide nut locations in the facing case. #4 self-tap screws will then join the members tightly. If dimensions are such that this cannot be done an intermediate flat plate can be used. This method is especially useful for mounting printed circuit cards perpendicular to wiring boards for test or other uses. Excellent support for cards is obtained in the grooves of side rails.

Patent Pending

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PKG.* QTY.	CAT. NO.	DESCRIPTION	PKG.* QTY.
PL4.8/8.5	Cov. Plt. 4.8"x8.5"	1	SC6-1	Screw, 6/32x7/16" Self Tp. Spec. Hd.	25
PL4.8/17	Cov. Plt. 4.8"x17.0"	1	SC4-1	Screw, 4/40x3/16" Self Tp. Pan Hd.	50
PL8.5/17	Cov. Plt. 8.5"x17.0"	1	SC4-2	Screw, 4/40x1/4" Self Tp. Truss Hd.	50
B97	Joiner Strip	1	SC4-3	Screw, 4/40x1/2" Self Tp. Rd. Hd.	25
B58	Corner Clips	4	SC2-1	Screw, 2/56x5/16" Rd. Hd.	25
BR56	Reverse Corner Brkts. w/Scr.	2	SC2-2	Screw, 2/56x13/16" Rd. Hd.	25
HI-63	Roll Pin Couplg. 1/8"x1-1/2"	25	NT2-1	Nut, 2/56	25
FT-1	Rubber Ft. w/hdwe.	8	NT4-1	Nut, 4/40	25
BU-1	Panel Bushings	6	SP12-1	Spacer, 0.188"x0.131"x0.43" Aluminum	20
BR50	Corner Brackets	25 Pr.	2AA2	Plate Fastener	25
BR55	Slide Nuts	25 Pr.	W5-1	Washer, Ext. Loc. #5	50

* Available in bulk also.

* Available in bulk also.

HD-6 Kit of above Hdwe. (exc. first 7 items) Qty. of each, 1/2 amt. shown

VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

TWX 213-240-2162

OUTSTANDING APPEARANCE

The new streamlined VECTOR-PAK case provides a handsome tight enclosure with slide-in covers and multiple card guides. No screws mar the elegant satin-finished aluminum of the upright case. The base upon which the case rests is attached by four flush screws not normally visible. Intended for plug-in modules and small instruments and controls, the package achieves rich appearance and quick accessibility at low cost.

BUILT-IN GUIDES FOR PRINTED CARDS

The extruded aluminum has parallel grooves in which circuit or equipment mounting boards and covers may slide or in which screws may thread. Many grooves give wide choice of position. Card plugs may project from the case or other types of plugs or terminals may be mounted thereon. For some applications, rubber feet may be attached to the bottom to make an attractive table top instrument. The base is attached to the main case with four #6-32 machine screws.

COVERS QUICKLY REMOVABLE

Slide covers slide into place and a stop prevents unintentional removal. If more rigid closure is desired additional screws may be installed between the side covers and the ledge of the side wall.

SPECIFICATIONS: Extruded walls are aluminum, Grade 6063-T5 with brushed satin-finish. To special order and slight extra charge cases will be anodized with color choices: Green, gray, red, blue, yellow, gold or natural clear.

Covers are diamond pattern Grade 3003-H14. If preferred flat satinized aluminum will be supplied instead of the above. Many attractive color effects and patterns can be supplied to order. Screws are #6-32 stainless steel.

Length of case (major dimension of base) is such that card widths in multiples of 1-1/2" will fit the grooves nicely. For example the 4-5/8" case is required for a 4-1/2" card width.

A few of the currently available sizes are tabulated below: Most of the cases have unperforated end bases. Two, however, are punched to permit mounting Vector Plugboards with attached Elco Varicon plug tips or printed circuit tabs. HF20-46-62/2 will mount 2, 4-1/2"x6-1/2" cards, Catalog No. 812 Plugboards (having 16 plug tips) or 2 Catalog No. 838A-1 or Cat. No. 831-1 Plugboards (having 22 p.c. tabs on one or 43 contacts on two sides, respectively. See Section IV, Page 10 of catalog for details of Plugboards. Other types can be mounted with slight modification of cards. A smaller size case, the HF20-31-42/3 will mount two 3"x4-1/2" Cat. No. 837 cards with 12 Elco Varicon tips (adding "WE" to Cat. Nos. will bring epoxy-glass instead of epoxy-paper).

These cases can also be made for production orders with extruded stock 1.6" wide instead of 2" or with extruded stock 2" wide except having 0.10" wide grooves instead of 0.075".

ORDERING INFORMATION

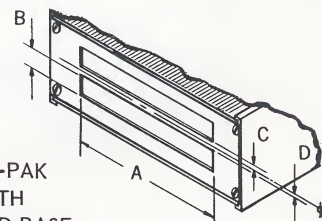
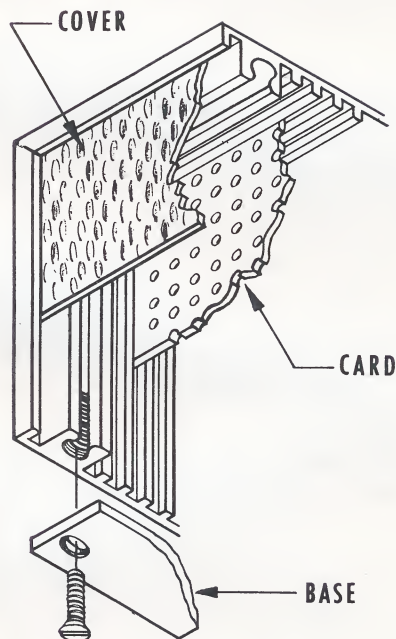
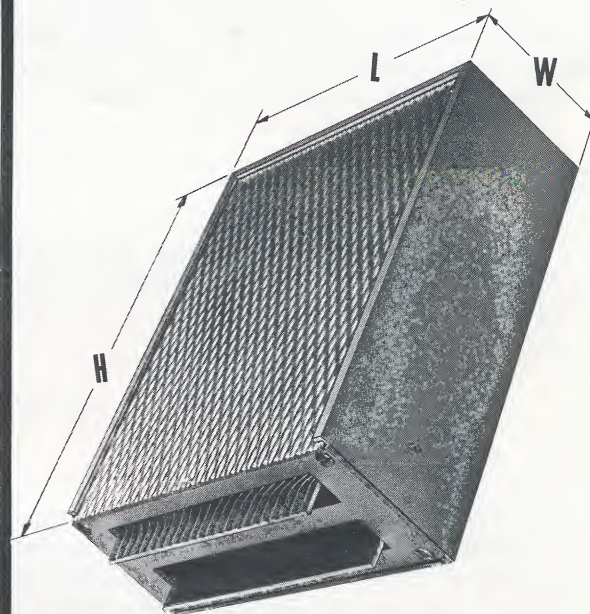
Cat. No.	Width	Length	Height	Base Details
HF20-46-62/2	2.0	4.62	6.21	2
HF20-46-62/1	2.0	4.62	6.21	1
HF20-31-42/3	2.0	3.12	4.21	3
HF20-31-42/1	2.0	3.12	4.21	1
HF20-31-86/1	2.0	3.12	8.68	1

Base Details:

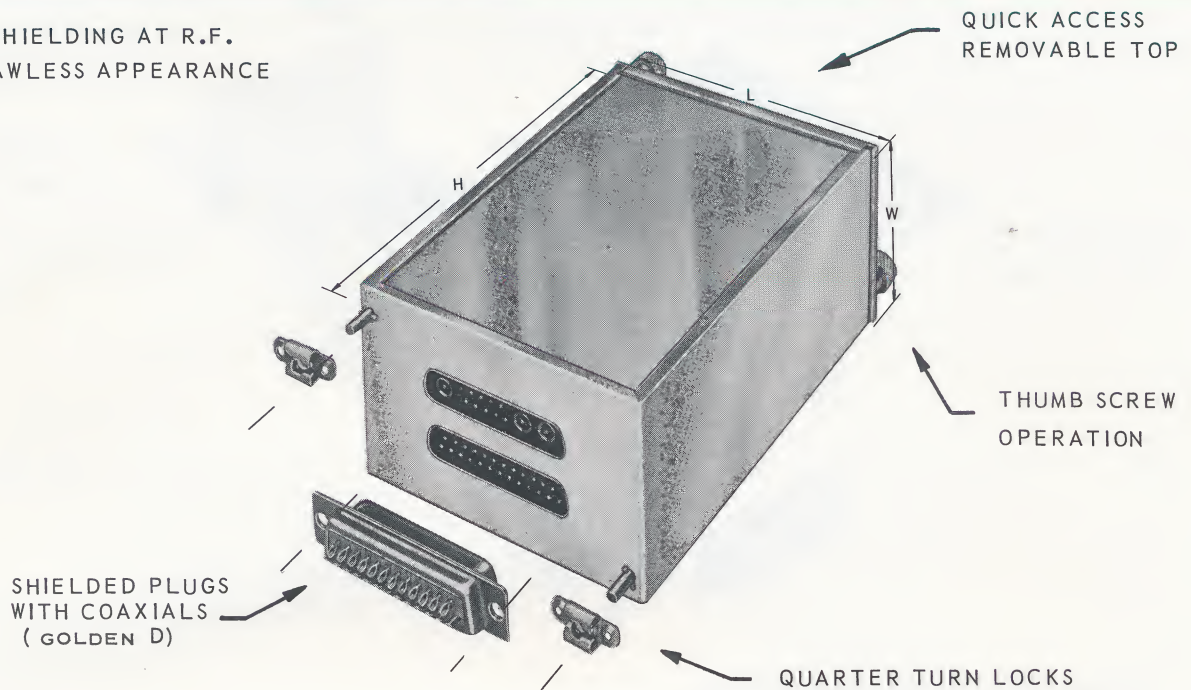
1. No aperture (exc 4 corner screw holes)
2. 2 Rect. apertures 'A'- 3.62; 'B'- .47; 'C'- .120; 'D' .165
3. 2 Rect. apertures 'A'- 2.50; 'B'- .47; 'C'- .120; 'D'-. 165
4. For Quarter Turn Locks as described on "High Frequency Vector-Pak" page add "L" to Catalog Number.

HF20-46-62/2 CASE PLUS

2 CAT. NO. 838AWE-1 PLUGBORDS

VECTOR-PAK
CASE WITH
PUNCHED BASE

60-80-DB OFSHIELDING AT R.F.
SMOOTH FLAWLESS APPEARANCE



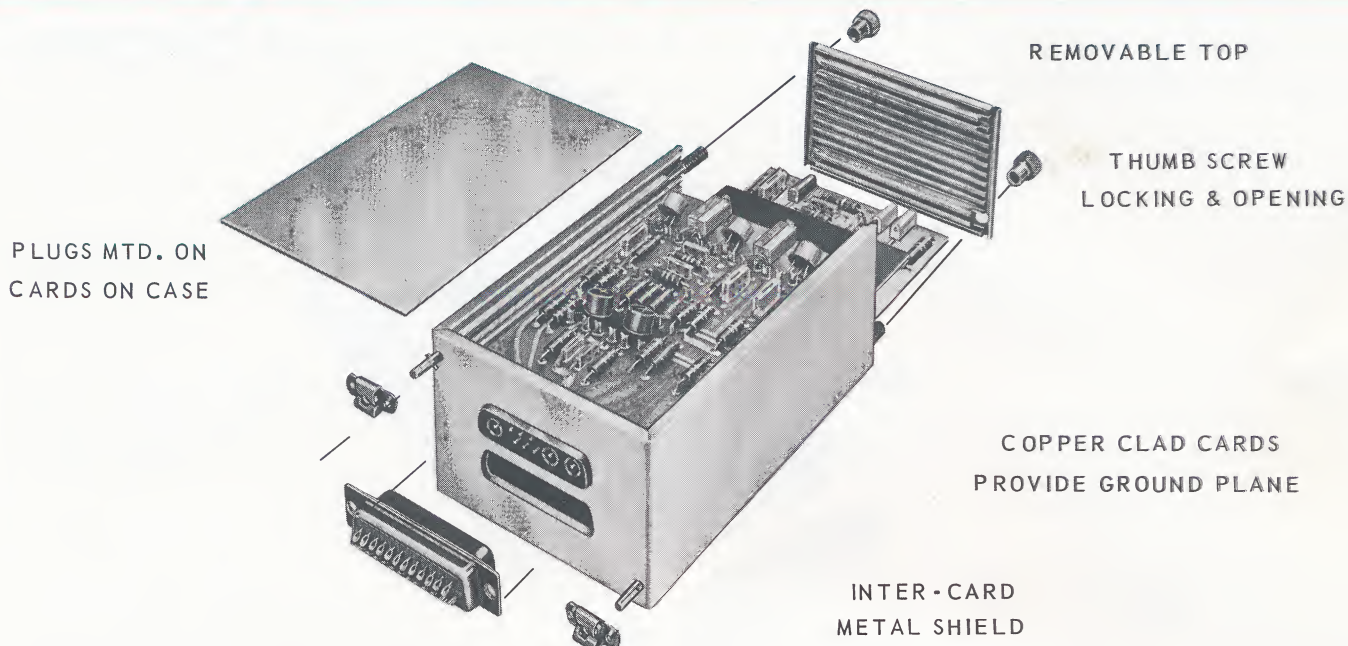
These new extruded aluminum, Vector-Pak pluggable modules were designed especially for enclosing I.F. type printed circuit cards in an RF tight shield suitable for use up to about 400 megacycles. They are equally useful as enclosures for low frequency circuits. The many advantages of plug-in card and module construction have not been readily obtainable before in the high frequency range because of the necessity for ground planes and individual metallic shielding for functional blocks of circuitry. A further need for quick access to test points and adjustment controls is now met with the removable top covers (released by two thumb screws), on the Vector-Pak modules. A unique arrangement both locks in the entire case and releases the top piece. Two other side plates sliding in over-lapping tight fitting grooves permit further wide open access to the interior where required.

LOCK-IN STUDS PROVIDED

The entire module is firmly locked into the overall enclosure by means of quarter turn locks operated as a dual function at the thumb-screw position. Thus the entire module may be quickly withdrawn from the chassis. Removal of the module top cover exposes the outer ends of printed circuit cards whereon test points and controls can be conveniently positioned for use. Metal shield plates can be slipped in the grooves.

COPPER CLAD CARDS FOR GROUND PLANE

Use of copper clad insulating board either etched for the desired circuit or uniformly punched for breadboarding will provide shielding when properly designed. One side of the board can carry a maximum of copper area, grounded, while the opposite side can provide the principal circuit connectors. Vector pad cutting tools can be used to cut isolating rings in the copper for leads to come thru when these are not provided by etching. These and other details of high frequency breadboarding are further discussed on pages 11 & 12 of Section IX of the catalog. Copper clad cards, notched for the DBM plug, are listed in ordering information (order separately from the case, if wanted). These cards are available with or without "G" pattern punching (see cat. page 4, Sec. II), one or two sided copper clad and with suitable brackets and holes for attachment of DBM plugs. Metal shielding panels can be inserted between cards if desired, by simply sliding them in the grooves.



PLUGS WITH COAXIALS AVAILABLE

Golden D, Mark I miniature plugs (Cinch & Cannon) available in a wide variety of sizes and configurations including coaxial elements are generally used at the bottom (or far end) of the unit. They may be mounted either upon the metal base or upon the slide-in card with provision to withdraw card and plug only rather than the entire case. Standard units are listed which are punched for the DBM size connector. Units with no punching are also listed for use with other types of connectors.

The module case sizes offered are intended for use with 1/16" thick circuit cards 4 1/2" wide or 3" wide, respectively, and with lengths which are standard Vector Plugboard sizes. Module widths of 2" and 1.6", respectively, are available. Other widths will be added as need arises.

Extruded walls are aluminum, Grade 6063-T5 with brushed satin finish. To special order, and slight extra charge, cases will be anodized with color choices: green, gray, red, blue, yellow, gold or natural clear. Covers are satinized aluminum. Screws are #6-32 steel. Length of case (major dimension of base) is such that standard Vector card widths will fit the grooves nicely. For example, the 4-5/8" case is required for a 4-1/2" card width. Lock studs and cross-pins: Steel, cad. plate and irridite. Lock Receptacles: Steel. Thumbscrews: Steel, nickle plate.

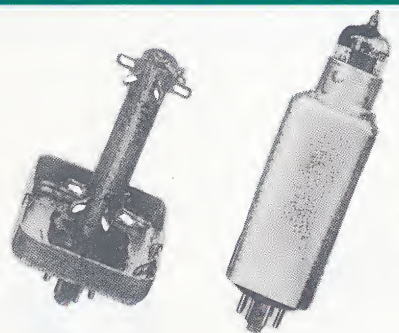
CATALOG NUMBER	WIDTH	LGTH.	HGT.	PLUG HOLES †	CARD SIZE *	DESCRIPTION
HF20-31-46/23	2"	4.62"	3.12"	2 (DBM)	3"x4-1/2"	Aluminum Case
HF20-31-46/21	2"	4.62"	3.12"	None	3"x4-1/2"	Aluminum Case
HF20-46-66/23	2"	6.62"	4.62"	2 (DBM)	4-1/2"x6-1/2"	Aluminum Case
HF20-46-66/21	2"	6.62"	4.62"	None	4-1/2"x6-1/2"	Aluminum Case
HF16-31-46/22	1.6"	4.62"	3.12"	1 (DBM)	3"x4-1/2"	Aluminum Case
HF16-31-46/21	1.6"	4.62"	3.12"	None	3"x4-1/2"	Aluminum Case
HF16-46-66/22	1.6"	6.62"	4.62"	1 (DBM)	4-1/2"x6-1/2"	Aluminum Case
HF16-46-66/21	1.6"	6.62"	4.62"	None	4-1/2"x6-1/2"	Aluminum Case
3234	{ CU 1 Side-Epoxy-Glass, 'G' }			Notched for	3"x4-1/2"	CU-Clad Board
3235	{ Pattern, w/mtg. Hdwe. }			Notched for	4-1/2"x6-1/2"	CU-Clad Board
PI16	(Cuts isolation pads in copper for leads thru Ground Plane)					Tool

DBM17W2

[P or S] Plugs & Recept., not furnished stocked by Cinch & Cannon Distributors, 15 Contacts plus 2 Coax or other contacts. Coax types as required available.

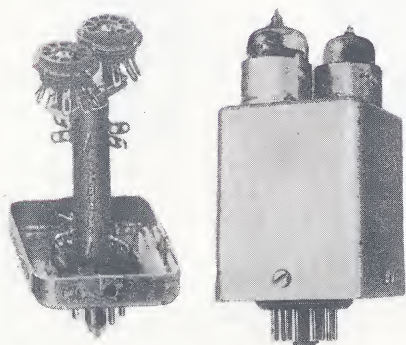
† Plug Holes fit above size plugs.

* Cards must be ordered separately.



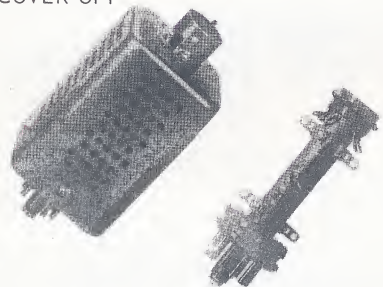
C12T

B12N



C10NN

COVER OFF



C12MP

A12N

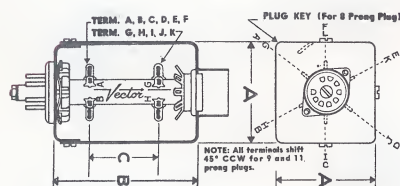
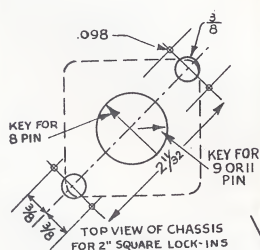


FIG. 1

TYPE WITH LOCKS



Amplifiers, counters, oscillators and the like can be readily assembled completely on Plug-Ins, permitting quick changes of circuits. Making a Plug-In unit involves little more than soldering in a few capacitors and resistors.

ECONOMICAL AND CONVENIENT

Plugs are standard mica-filled, ring mounted octal style with 8 prongs as standard. (9 or 11 prong plugs also available—see below). Sockets are standard mica-filled phenolic in octal, 7 Pin miniature or 9 Pin noval as ordered. Contacts are cadmium plated brass. Terminal turrets are Grade XXXP phenolic tubing 1/2" O.D. with 1/16" wall, carrying 12 plated brass terminals. Aluminum covers may be quickly detached by removing screws at base, making inside completely accessible. Miniature and noval types carry military type tube shield base. Main tube shield not furnished. Types in bold face are most widely used and generally preferred for distributor stock.

SINGLE TUBE TYPES

CATALOG NUMBERS			CAN SIZE		TERM. SPACE
Octal	7 Pin	9 Pin	A	B	C
B10-0	B8 -M *	B8 -N *	1.42"	2.0"	0.87"
B12-0 *	B10-M	B10-N	1.42"	2.5"	1.37"
C8 -0	B12-M *	B12-N *	1.42"	3.0"	1.87"
C10-0 *	C8 -M *	C8 -N *	2.0"	2.0"	0.87"
C12-0 *	C10-M *	C10-N *	2.0"	2.5"	1.37"
A8 -0 *	C12-M	C12-N	2.0"	3.0"	1.87"
A10-0 *	A8 -M *	A8 -N *	No Can		0.87" *
A12-0 *	A10-M *	A10-N *	No Can		1.37" *
	A12-M *	A12-N *	No Can		1.87" *

TWO TUBE TYPES

*Deduct 3/16" for Octals

.....	C8 -MM *	C8 -NN *	2.0"	2.0"	0.62"
.....	C10-MM *	C10-NN	2.0"	2.5"	1.0 "
.....	C12-MM *	C12-NN	2.0"	3.0"	1.37"

TYPES WITHOUT SOCKETS

Any of the types tabulated may be obtained less sockets but with terminal turrets and plugs. These are useful for a multitude of PLUG-IN applications.

CAT. NO.	CAN SIZE		CAT. NO.	CAN SIZE	
B- 8T	A	B	C- 8T	A	B
B-10T	1.42"	2"	C-10T	2"	2"
B-12T	1.42"	2-1/2"	C-12T	2"	2-1/2"
	1.42"	3"			3"

*NOTE: TYPE WITH STAR ARE NOT STOCK. AVAILABLE ON SPECIAL ORDER 50 OR MORE.

TYPES WITH CAN AND PLUG ONLY

CAT. NO.	CAN SIZE		CAT. NO.	CAN SIZE	
B- 8	A	B	C- 8	A	B
B-10	1.42"	2"	C-10	2"	2"
B-12	1.42"	2-1/2"	C-12	2"	2-1/2"
	1.42"	3"			3"

Add "K" to No. for 9 prong octal type plug.

Add "K" to No. for 11 prong octal style plug.

Add "J" to No. for "MFE" socket casting, beryllium contacts, silver plated, tin dipped.

Add "G" to No. for impregnation of turret for moisture and fungus protection.

Add "P" to No. for perforation of covers for ventilation.

Anodized finishes, natural or in color to order.

Studs to lock 2" sq. units firmly in sockets are available.

LOCK-IN UNITS

LOCK-IN UNITS MAY BE ORDERED WITH "C" CASES. "L" LOCKS ARE STANDARD. THE "L" TYPE PER FIGURE 1 HAS HANDLES AND SPRINGS AT THE TOP AND CROSS-PINS AT THE BOTTOM WHICH ENGAGE THE 'AIRLOC' CHASSIS FASTENERS WITH 1/4 TURN. CHASSIS THICKNESS TO 3/16" ACCEPTED. ORDER SPECIAL STUDS FOR GREATER THICKNESS. 'AIRLOC' CHASSIS FASTENERS REQUIRE TWO SCREWS OR RIVETS EACH .093" O.D. NOT FURNISHED. ADD "L" TO CAT. NO. OF PLUG-IN TO OBTAIN THESE.

CASE FINISH AND PERFORATION

Anodized finishes provide a durable and attractive finish for aluminum cases in the following colors: clear, gray, yellow, green, red, blue and black. In production quantities the hammertone painted finishes can also be supplied. 1/8" holes can be perforated in B and C type cases. Add "P" to part number for perforation.

PATENTED

LOW COST OCTAL PLUG-INS

These provide maximum economy in small drawn aluminum plug-ins. A wide variety of circuits can be packaged inside using Vector mounting structures. Equipment manufacturers can use plug-ins where cost was prohibitive before. Similar to those on page 1 of Section V they differ in that plugs are crimped to the base by a simplified production method which results in lower cost. A ground lug is provided, also 2 holes .0136" diameter in base spaced 1.56" on diagonal for mounting terminal cards per below or other parts. Finish: Caustic etch is standard. May also be anodized per Mil-8625A to color selected.

For minimum cost, specify "No Finish". Plug body: Black phenolic. Plug pins: Brass, Nickel plate. Nuts and screws: Steel, cad. plate.

ORDERING INFORMATION

CATALOG NO.	HEIGHT "B"	WIDTH "A"
C-8-K1.02	2	2
C-10-K1.02	2 1/2	2
C-12-K1.02	3	2

NOTES: For anodized finish, state color, viz clear, gray, yellow, red, green, blue, black, gold. (Extra charge) Painted finishes on special order.

2. For quantity orders bracket mounting holes in base eliminated upon request.

3. For plug key pointed to side add /90 at end of number.

4. Other case lengths can be made to order.

TERMINAL CARD ADDITIONS FOR ABOVE

Bracket mounted punched cards can be supplied and screwed to bases of above plug-ins by user to provide simplified mounting of components. Holes fit a variety of turned terminals or Vector Push-in terminals. Choice of XXXP phenolic or epoxy glass is offered (see Vectorbord bulletin per Section II, Page 2 for specs.) Boards fit diagonally across case. User can also provide other arrangements by cutting his own Vectorbord and using other brackets from choice offered on Page 1 of Section X of catalog.

ORDERING INFORMATION

CAT. NO.	USE IN	SIZE	MATERIAL	HOLE D	SPACED
511	C-12K1.02	2.7X1.9	XXXP	3/32	.265
512	C-12K1.02	2.7X1.9	EPOXY GL.	3/32	.265
513	C-12K1.02	2.7X1.9	XXXP	1/16	ALT. 0.1
514	C-12K1.02	2.7X1.9	EPOXY GL.	1/16	ALT. 0.1

PLUG-INS WITH TURRET POST

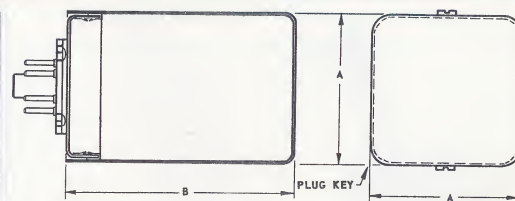
Plug-in cases with the popular Vector terminal turret post attached to the center of the plug may be ordered as follows: Phenolic material is supplied unless otherwise specified as indicated.

ORDERING INFORMATION

CAT. NO.	HEIGHT			
	"A"	"B"	"C"	"D"
C-8T-K1.02	2	2	7/8	1 1/2
C-10T-K1.02	2	2.5	1-3/8	2
C-12T-K1.02	2	3	1-7/8	2 1/2

For epoxy-glass turret add WE to above numbers.

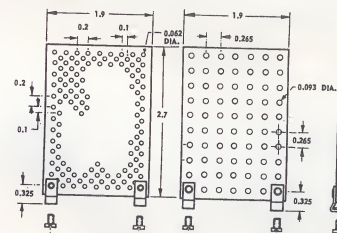
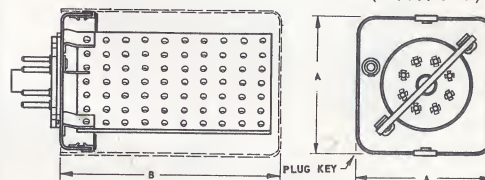
TRANSISTOR MOUNTING ADDITION TO TURRET POST: For round wafer added at top of turret (see figure) add -1 to above numbers. Wafer is of similar material to turret post. Provides lead mounting holes for 4 small transistors.



C-12-K1.02



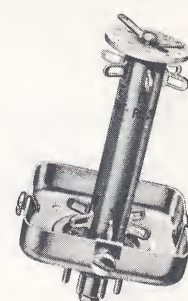
C-12-K1.02 (WITH 511)



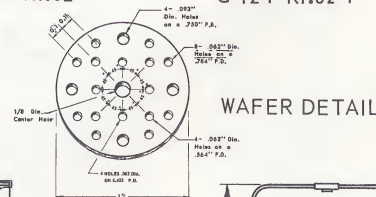
513 & 514 511 & 512
TERMINAL CARD DETAIL



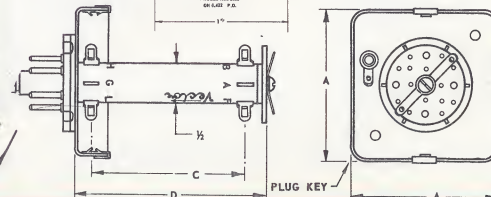
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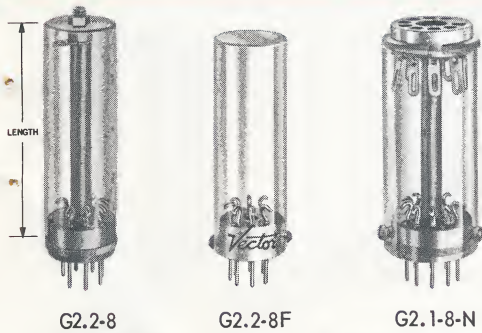


C-12-T-K1.02-1



WAFER DETAIL

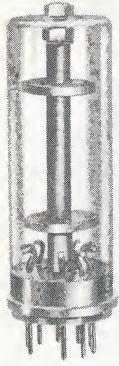




G2.2-8

G2.2-8F

G2.1-8-N



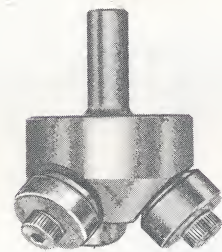
G2.1-8-2B



G2.1-8



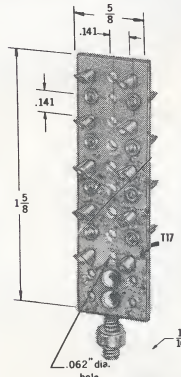
G2.11-8



CRIMPING TOOL P-94A



G2.2-8-4



G2.2-8-4 CARD W/TERMS.



G2-10-T-1

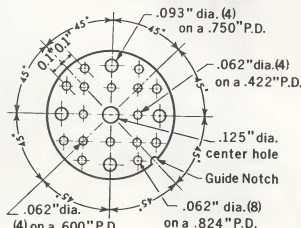


FIG. 1 WAFER DWG. DETAIL

VECTOR ROUND PLUG-IN CASES

Vector Round Case Plug-Ins make compact circuit packages. Tube base plugs and aluminum shells are featured in a broad range of standard sizes. A wide choice of standard internal structures and hardware compatible with printed circuits, hand wired or encapsulated units is available. Where shielding or reparability is important, Vector metal cases are especially desirable. Cases may be purchased without any internal structure, with punched terminal cards or "decks" for vertical or horizontal component placement, with a turret, or with an internal structure to your special design. Cases are available with high-grade MFE plugs ranging from 4-prong octal to 14 pin relay style. All units may be purchased with hold down locks (See Section IV, Pg. 5 & 6) and with special markings or colors to order. Special heights are readily made.

5/8" DIA. X 2" LG. ROUND ALUMINUM PLUG-IN CASES.

PART NO.	PLUG DESCRIPTION	SOCKET	INTERNAL STRUCTURE
G2.2-8	7 P.MIN. NO. K1.335 OR EQUIV.	NONE	SPACER
G2.2-8F	7 P.MIN. NO. KF1.335	NONE	NONE
G2.2-8M	7 P.MIN. NO. KF1.335	7 P. MIN.	SPACER
G2.2-8-2B	7 P.MIN. NO. K1.335	NONE	SPACER, 2 DECKS W/O TERMS.
G2.2-8-4	7 P.MIN. NO. KF1.313	NONE	CARD W/TERMS.
G2.2-8-4B	7 P.MIN. NO. KF1.313	NONE	CARD W/O TERMS.
G2.21-8*	7 P.MIN. NO. K1335 UNINSTALLED	NONE	NONE

3/4" DIA. X 2" LG. ROUND ALUMINUM PLUG-IN CASES.

PART NO.	PLUG DESCRIPTION	SOCKET	INTERNAL STRUCTURE
G2.1-8	9 P.MIN. NO. K1.435 OR EQUIV.	NONE	SPACER
G2.1-8F	9 P.MIN. NO. KF1.435	NONE	NONE
G2.1-8N	9 P.MIN. NO. KF1.435	9 P. MIN.	SPACER
G2.1-8-2B	9 P.MIN. NO. K1.435	NONE	SPACER, 2 DECKS W/O TERMS.
G2.1-8-4.6	9 P.MIN. NO. K1.413	NONE	CARD W/TERMS.
G2.1-8-4.6B	9 P. MIN. NO. KF1.413	NONE	CARD W/O TERMS.
G2.11-8*	9 P. MIN. NO. K1.435 UNINSTALLED	NONE	NONE

* Supplied with uninstalled plug for customer installation using crimping tool P-94A. For other plugs fitting these cases, See Section VI, Pg. 1.

TERMINAL CARD DETAIL (5/8" & 3/4" Dia. Plug-In Cases)

Card Material: Epoxy-Paper, 1/16" thick, w/T17 Brass, Fused tin pltd. Forklet Terminals installed or none for "Card only".

Mounting Screws: Spade Bolt - #4-40 thread x 5/8" overall, steel, cadmium plated. Nut - Rd. #4-40 .187" x .094" thick, brass, cadmium plated.

INSULATING SLEEVE G2.1-8-4, G2.1-8-4B, G2.1-8-2B - Mylar, .005" thick 1-5/8" x 2-3/8"
G2.2-8-4, G2.2-8-4B, G2.2-8-2B - Mylar, .005" thick 1-5/8" x 2-1/8"

1-1/4" DIA. X 2-1/2" LG. ROUND ALUMINUM PLUG-IN CASES.

PART NO.	PLUG DESCRIPTION	SOCKET	INTERNAL STRUCTURE
G2-10	8 P.OCT. NO. KF1	NONE	NONE
G2-10-KF	11 P.OCT.* NO. KF	NONE	NONE
G2-10-K1.04	4 PIN *NO. KF1.04	NONE	NONE
G2-10-KR1.14	14 P. RELAY NO. KR1.14	NONE	NONE
G2-10-KR1.334	7 P.MIN. NO. KR1.334	NONE	NONE
G2-10-KR1.434	9 P. NOV. NO. KR1.434	NONE	NONE
G2-10-O	8 P. OCT. NO. KF1	8 P. OCT.	SPACER
G2-10-T	8 P. OCT. NO. KF1	NONE	TURRET
G2-10-T-1	8 P. OCT. NO. KF1	NONE	TERM. TURRET AND WAFER
G2-10-2B	8 P. OCT. NO. K1	NONE	SPACER, 2 DECKS W/O TERMS.
G2-10-4	8 P. OCT. NO. KF1	NONE	CARD W/TERMS.
G2-10-4B	8 P. OCT. NO. KF1	NONE	CARD W/O TERMS.

* Octal size tube base style 1-1/4" O. D.

TERMINAL CARD DETAIL (1-1/4" Dia. Plug-In Cases)

Card Material : Epoxy-Paper, 1/16" thick, w/T6.0 Brass, Fused tin pltd. Forklet Terminals installed or none for " Card only".

Mounting Screws & Nuts.

Mounting Screw, Top: # 4-40x3/16" binder head, steel, cad. pltd. iridite.
Mounting Screw, Bottom: # 4-40x1-1/8" round head, steel, cad. pltd. iridite with # 4-split lockwasher, steel, cad. pltd.

Plug Center Screw: # 5-40x1" round head, steel, cad. pltd. w/Pal nut
5-40, steel, cad. pltd. iridite.

1" DIA. X 3" LG. ROUND ALUMINUM PLUG-IN CASES.

PART NO.	PLUG DESCRIPTION	SOCKET	INTERNAL STRUCTURE
G2.3-12-P8FL	8 P. LOCTAL NO. P8FL	NONE	NONE

CABLE TO TUBE BASE PLUG CONNECTORS

PART NO. END OUTLET	TYPE	PLUG DESCRIPTION	O. D.	LENGTH LESS PRONGS	INTERNAL STRUCTURE	SHELL
P7D	7 PIN NO.	KF1.335	5/8"	2.2"	NONE	ALUM.
PK1D	8 P. OCT. NO.	K1	1-17/64"	1-1/4"	NONE	POLY. BLACK
P9D	9 PIN NO.	KF1.435	3/4"	2.3"	NONE	ALUM.

PART NO. SIDE OUTLET	TYPE	PLUG DESCRIPTION	O. D.	LENGTH LESS PRONGS	INTERNAL STRUCTURE	SHELL
P7C	7 PIN NO.	K1.334	5/8"	2.2"	SPACER	ALUM.
P8C	8 P. OCT. NO.	K1	1-17/64"	1-1/4"	NONE	POLY. BLACK
P9C	9 PIN NO.	K1.434	3/4"	2.3"	SPACER	ALUM.

GENERAL MATERIAL SPECIFICATIONS

CASE **Material:** Aluminum, Grade 1100-0 Thickness .020" for 1-1/4" & 1" dia. cases .015" for 5/8" & 3/4" dia cases.
Finish Std.: Caustic Etch & Short Alumilite.
Optional: Anodized: Clear, black, blue, yellow, purple, grey, orange, green, gold & silver.
Painted: Specify Color.

CENTER SCREW and NUT # 5-40x2" Rd. Hd. Steel, Cad. Iridite for G2.2-8, G2.2-8M, G2.2-8-2B, G2.1-8, G2.1-8N, G2.1-8-2B.
5-40x2-11/16" Rd. Hd. Steel, Cad. Iridite for G2-10-0.
5-40x3-5/16" Rd. Hd. Steel, Cad. Iridite for G2-10-2B.
4-40 x 1-1/8" Rd. Steel, Cad. Iridite for G2-10-4, G2-10-4B
5-40x1" Rd. Hd. Steel, Cad. Iridite w/Pal Nut #5-40 Steel, Cad. Iridite for G2-10, G2-10KF.

DECKS and TERMINAL CARDS

Decks: G2.1-8-2B, G2.2-8-2B-1/16" Thick Epoxy-Glass Grade G-10 Per Mil-P-18177 with 6 .062" dia. holes on .375" pitch dia. G2-10-2B 1/16" thick XXXP Phen. per Mil-P-3115B per fig. 1.

Optional: Terminal Cards w/1/16" Epoxy-Glass Material with other Terminals See Sect. VIII, Pg. 1 & Sect. II for Board Specifications.

LOCKS available for all listed units See Section V.

PLUGS Tube Base Configuration All, except 14 Pin which is Relay Type.
Casting Std.: Mica Filled Phenolic, Grade MFE Per Mil-M-14E.
Optional: 7, 9 & 14 Pin Plugs-Diallyl Phthalate or other high temperature material.
Knurl Nut & Side Screws 4, 8, 11 Pin Octal-# 4-40 Thread.
7, 9 & Pin-# 1-72 Thread.
Plug Pins: 4, 8, 11 Pin Octal ; Brass, Nickel Pltd. : 7, 8 Prong Loctal, 9 & 14 Pin ; Phosphor Bronze, Cadmium Pltd. per Sect. V.
Optional: 7, 9 & 14 Pin Plugs supplied to special order in 1-1/4" round cans, using inside fitting bases per Section V.

SOCKETS **where used:** MFE Casting, Brass Cad. Pltd. Contacts Mil- Sockets available on order.

SPACERS Phenolic .235" diameter (1/2" dia. w/G2-10-0).

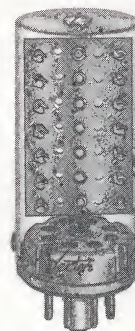
For additional Specification Data, contact factory.



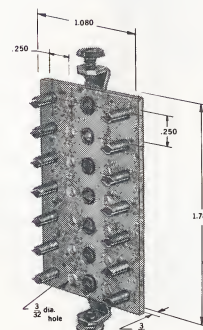
G2.3-12-P8FL



G2-10



G2-10-4



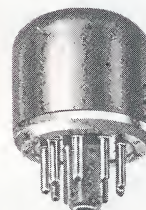
G2-10-4 CARD W/TERMS.



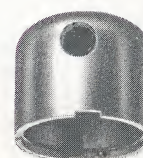
G2-10-2B



G2-10-KR1.434



P8C



SHELL



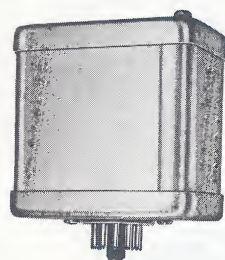
P9C



P9D

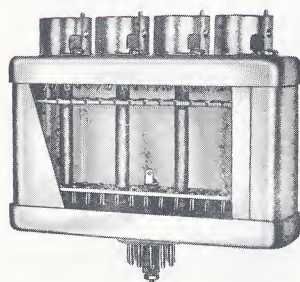
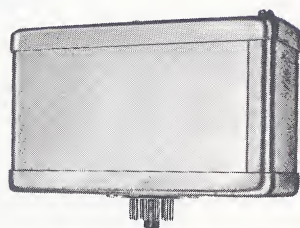
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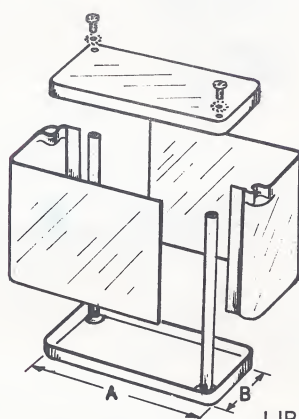


DX-12K

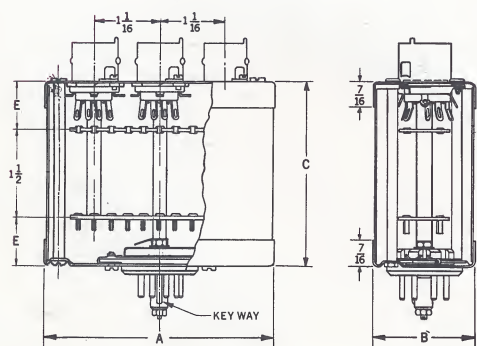
G1.1X12K



E2X-12-4NK-2



LIP-LOC CASE
EXPLODED VIEW



TYPE X LIP-LOC CASE

FOR COMPACT ASSEMBLIES

LIP-LOC Cases provide sturdy, economical small enclosures for electronic equipment, especially useful for plug-in units. They resemble drawn cases with outside fitting covers (also available) but have many advantages. Component parts are easily mounted from any of the sides. Punching of sides for either ventilation or parts mounting is easy. LIP-LOC Cases consist of outside fitting covers and two interlocking center section pieces. Plain cases or units with mounted 11-pin octal plugs in the bases are offered as standard but many other plug types can be supplied to order.

In production quantities, terminal strips, turrets and sockets can be installed in cases to customer's order. If interested write for layout sheets which facilitate ordering in such manner that the factory can comply economically. Terminal strips with socket and turret mounting arrangements are similar to those shown on this page, in other pages of this catalog and in the Multi-Use Plug-in Kits described in Section V.

CONSTRUCTION

The sketch at the left shows the LIP-LOC construction. The top and bottom covers are held together by two long aluminum posts. These are placed at diagonally opposite corners and are internally threaded to receive 6/32 screws. Thus, only two screws need be removed to disassemble the case. The bottom cover is dimpled to recess the screw heads. Where ventilation is desired, perforated center sections can be ordered. Various Plugs and Locks for the above cases are described on the Plug-in accessory page.

LIP-LOC ORDERING INFORMATION

CATALOG NUMBER		OVERALL CASE DIMENSIONS (INCHES)		
CASE ONLY, COMPLETE	CASE WITH 11-P OCT. PLUG	LENGTH A	WIDTH B	HEIGHT C
DX-12	DX-12K	3.1	2.1	3
EX-12	EX-12K	3.88	1.63	3
EIX-12	EIX-12K	5.88	1.63	3
E2X-12	E2X-12K	4.81	1.68	3
FX-12	FX-12K	4.5	2.4	3
GIX-12	GIX-12K	4.1	2.1	3
G1.1X-12	G1.1X-12K	5.1	2.1	3

LIP-LOC PLUG-INS WITH DECK STRIPS

The following Standard Plug-in types with sockets in the upper surface and with terminal decks inside (see sketch) may be ordered as stock items. These carry 11-pin octal style plugs in the bases as described above (or others to special order) and 9-pin noval tube sockets in the upper surface. Other tube or transistor socket types will be substituted as described under Variations below. Height C is 3" all cases.

CAT. NOS.	NO. OF SKTS. *	DIMENSIONS			DECK DIMENSIONS
		A	B	E	
DX-12-2NK-2	2	3.1	2.1	.75	1.86 X .84
EX-12-3NK-2	3	3.88	1.63	.75	2.92 X .84
EIX-12-5NK-2	5	5.88	1.63	.75	5.05 X .84
E2X-12-4NK-2	4	4.81	1.68	.75	4.0 X .84
GIX-12-3NK-2	3	4.1	2.1	.75	2.92 X .84

* **VARIATIONS** For 7-pin miniature sockets instead of 9-pin substitute M for N in above Cat. Nos. or for combinations use MNM for 9-pin socket mounted between two 7-p. sockets, etc. (Small set-up charge for change). Transistor sockets of small or power type can be mounted on top instead of tube sockets. To order such items use Cat. Nos. above but state number and type of transistor sockets desired. (Set-up charge). SEE FURTHER VARIATIONS ON OTHER SIDE

LIP-LOC CASES, Cont'd. - VARIATIONS

To obtain perforated center sections for cases add P to Catalog number. For installed plugs other than 11-p. octal add number of plug desired from Accessory Page to case number of case. Mating receptacles also available.

LOCKS: For quarter turn locks installed in any above cases, add L for handle type, L15 for screwdriver type, to above Catalog numbers. For ball detent type locks add L9 to Catalog number. (See Plug-in Accessory page for details).

SPECIFICATIONS: Center sections Grade 3003-H14 Aluminum; Bases Grade 3003-0; both with caustic etch finish but on order will anodize to Mil. Spec. Posts are 3/16" O.D. Aluminum, 6/32 Internal Thread.

DRAWN ALUMINUM CASES WITH BASES ONLY

These cases and covers are preferable to LIP-LOC types for making hermetically sealed assemblies with plugs or headers. Standard cases and covers as listed below are supplied without finish, but for soldering may be had with copper plate plus fused tin finish to special order. Other finishes supplied to order. Hermetically sealed plugs or headers (see Plug-in Accessory Pg.), & base mtg. holes & nuts supplied to order.

SQUARE CASES Cases .020" Thk.; Ins. Fit Bases .040" Thk. Alum.

CATALOG NUMBERS		DIMENSIONS (INCHES)		
CASE	BASE	CASE		BASE
		A OR B	C	AA OR BB
M-1100-5	C-16-B1	1.42	2	1-3/8
M-1100-7	C-16-B1	1.42	2 1/2	1-3/8
M-1100-9	C-16-B1	1.42	3	1-3/8
M-1100-13	C-16-B1	1.42	4	1-3/8
M-1106-5	M-1010-1	2	2	1.945
M-1106-7	M-1010-1	2	2 1/2	1.945
M-1106-9	M-1010-1	2	3	1.945
M-1106-11	M-1010-1	2	3-1/2	1.945

RECTANGULAR CASES

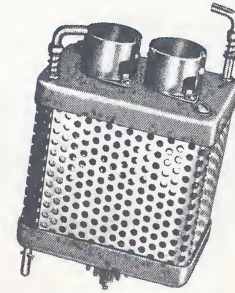
ALL DRAWN CASES in following table are 2-31/32" high (C dim.) Bases are outside fitting and when in place cases measure 3" top to bot. Thickness of base .040" all sizes

CATALOG NUMBERS		DIMENSIONS (INCHES)				
CASE	BASE	CASE			BASE	
		A	B	D	AA	BB
1930-01/1	M62	2-15/16	2.0	.032	3.1	2.1
1930-01/2	M1136	3-3/4	1 1/2	.040	3.88	1.63
1930-01/5	M54	4-3/8	2-5/16	.040	4.5	2.4
1930-01/6	M63	4	2	.040	4.1	2.1
1930-01/7	M64	5	2	.040	5.1	2.1

ROUND CASES Bases are of .040" thick aluminum and fit inside of cases

CATALOG NUMBERS		DIMENSIONS (INCHES)				
CASE	BASE	A	C	D	AA	CC
1930-19/4	MC-2414-2	1-1/4	2	.020	1.198	3/8
1930-19/17	MC-2414-2	1-1/4	2 1/2	.020	1.198	3/8
1930-19/11	MC-2414-2	1-1/4	3	.020	1.198	3/8
1930-19/15	MC-2414-2	1-1/4	4	.020	1.198	3/8
1930-17/6	NOT AVAIL.	3/4	1-7/8	.015	NOT AVAIL.	
1930-17/10	NOT AVAIL.	3/4	3	.015	NOT AVAIL.	
1930-16/3	NOT AVAIL.	5/8	1-7/8	.015	NOT AVAIL.	
1930-16/6	NOT AVAIL.	5/8	3	.015	NOT AVAIL.	

DX-12-2NK-2(PL)



1930-01-7
CASE



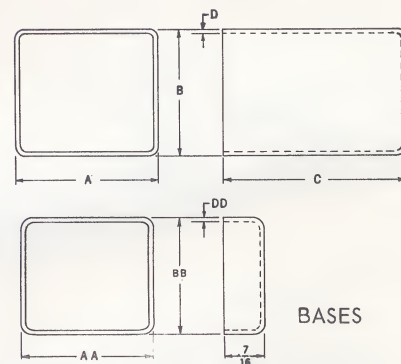
M64
BASE

1930-19-4
CASE



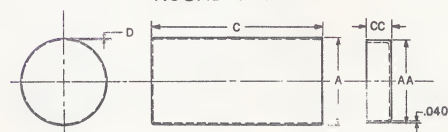
MC-2414-2
BASE

SQUARE & RECTANGULAR CASES



BASES

ROUND CASES



PATENTED

QUARTER TURN LOCKS

Long steel shafts with a spring at the upper end and cross-pins at the lower are intended to pass through plug-in cases and into a chassis where the cross-pins will interlock with receptacles. Two types are available. The first and most popular type has a right angle handle, the second has a top screw-driver slot. The handle type has an 'Airloc' fastener receptacle, the screw-driver type has a 'Camloc'. Lock shafts are supplied installed in plug-in cases to order (small set-up charge) provided the case is larger than the 1/4" diameter round type or the 1-7/16" square type. The length from the upper surface of the plug-in case to the cross-pin is critical ($\pm 1/16"$) and unless otherwise specified will be such as to mount the unit on a 1/16" chassis. Any other thickness or special requirements must be specified.

SPECIFICATIONS

Handle: steel with cadmium plating per MIL-QQ-P416 Type I Class II. Cross-pin: hardened steel with cadmium plating per MIL-QQ-P416 Type I Class II. 'Airloc' receptacle: steel with cadmium plating. 'Camloc' receptacle: steel, cad. irridite finish. Spring: nickel plated per MIL-QQ-N-290 Type 7 Class I. For military use finish will be irridite per MIL-QQ-P416 Type II. Class II on special order.

ORDERING INFORMATION

If locks are desired in any of the plug-in units listed in catalog (except small types mentioned above) add following designations to the regular plug-in catalog no. Add 'L' for handle type quarter-turn locks. Add 'L15' for screw-driver type quarter-turn locks. 'Airloc' receptacles will be included with 'L' type handles. 'Camloc' receptacles will be included with 'L15' type handles.

HOLE LAYOUT FOR QUARTER-TURN LOCKS

Standard mounting positions for Lip-Loc and Frame-Loc cases may be obtained by writing to factory for engineering bulletin. Catch-Ball fasteners may be mounted along the center line of cases as desired.

LOCK PARTS

Lock parts may also be purchased separately, including springs, washers, cross-pins and receptacles as well as handles in various lengths (without cross-pin holes). Other lengths than as listed can be made to order with small set-up charge. Also the cross-pin hole will be drilled to order by specifying the position "A" (small set-up charge). The cross-pin is supplied separately since it will usually be necessary to press it in after the shaft is inserted in the case. The knurled center section holds it firmly in place. A pliers-like tool is listed which facilitates the insertion of the cross-pin if a large number of units are to be assembled.

ORDERING INFORMATION

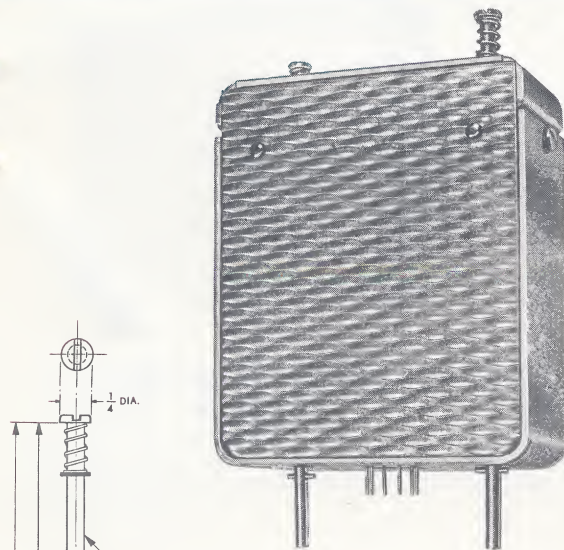
CAT. NO.	PART DESCRIPTION	LGTH. 'B'
2711-12	'HANDLE TOP' LOCK SHAFT UNDRILLED	2-15/16"
2711-11	"	3-7/16"
2711-10	"	3-15/16"
2711-9	"	4-7/16"
2711-8	"	4-15/16"
2711-15	"	5 1/2"
2710-16	'SCREWDRIVER' LOCK SHAFT UNDRILLED	4-15/16"
2711-17	"	5-15/16"
L11	LOCK SPRING	
L12	CROSS-PIN	
L13	LOCK WASHER	
L14	'AIRLOC' RECEPTACLE FOR HANDLE TYPE LOCK	
0917-2	'CAMLOC' RECEPTACLE FOR SCREW-DRIVER TYPE LOCK	
P-108	CROSS PIN PLIERS	

VECTOR ELECTRONIC CO., INC.

1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

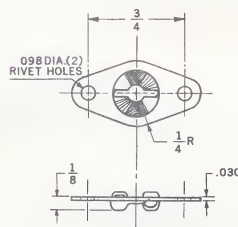
TWX 213-240-2162

PLUG-IN UNITS

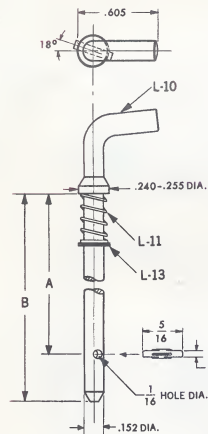


FRAME-LOC CASE
WITH L-15 LOCKS

PATENTED

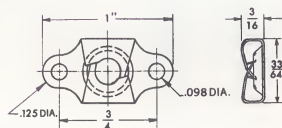


L-15 ASSEMBLY



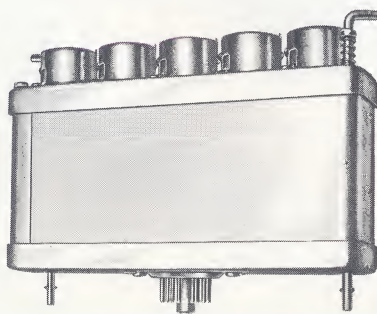
L ASSEMBLY

0917-2
RECEPTACLE



L-14
RECEPTACLE

LIP-LOC CASE
WITH L LOCKS



CATCH-BALL LOCKS

These simple locks attach to the bottom of plug-in units. A ball-like end slips into a catch mounted on the chassis and requires $3\frac{1}{2}$ - 5 lb. pull per catch to disengage. Several stud lengths and a chassis catch are listed below.

SPECIFICATIONS: Studs, Alum. grade 17ST4. Catch, Stl. Cad.

ORDERING INFORMATION

To order 2 locks installed on applicable cases add 'L9' to catalog number of the case. Catches are furnished. Locks will be mounted along the longer center line of the case.

PARTS FOR CATCH-BALL LOCK ASSEMBLIES

CAT. NO.	LGTH. A	THRD. B	DESCRIPTION
L9.5	0.50"	5/40	STUD
L9.6	0.63"	5/40	STUD
L9.7	0.88"	6/32	STUD
0911-3	SEE ILLUSTRATION		CATCH

LOCKS FOR ROUND CASES

Adjustable clamps (screw-driver tightened) for $1\frac{1}{4}$ " round case plug-ins require minimum space. (See figures). Material: Stainless Steel. Order as No. L-17 clamp for $1\frac{1}{4}$ " dia. (Also available for 1" dia. cases).

WIRE LOCKS: These provide simple, inexpensive hold-down clamps for $\frac{3}{4}$ " and $5/8$ " dia. plug-ins with 2" length. Brackets attach with socket mounting screws. Formed steel wires hook to loops in bracket and snap over case. Order as No. L-18 (Fits either case) 2 brackets and a wire included in each catalog number.

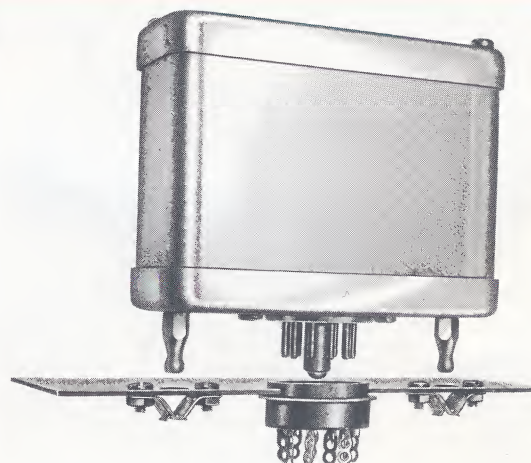
PLUGS AND HEADERS

Unless otherwise specified Octal 8-pin plugs are supplied in 'B', 'C' and 'G2' type cans and Octal 11-pin plugs in listed Lip-Loc cases. Following is a list of other plugs and headers which will be installed to order in Vector Plug-in units, where size permits, by adding the designated code letter to the plug-in catalog number as listed elsewhere. To order, substitute the code letter of the plug normally installed in the unit with the desired plug code letter. Plugs of Vector manufacture are further described in Section V of the catalog. For details of plugs and headers not made by Vector please refer to the manufacturer's catalogs.

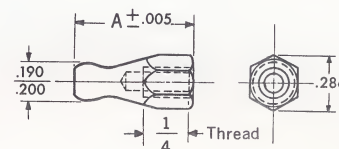
CAT. NO.	PINS	STYLE	MATERIAL	NOMINAL HOLE SIZE *
K1.04	4	Octal	Mica Filled Phenolic (MFE)	1.172"
K1.06	6	Octal	Mica Filled Phenolic (MFE)	1.172"
K1	8	Octal	Mica Filled Phenolic (MFE)	1.172"
K1.1	9	Octal	Mica Filled Phenolic (MFE)	1.172"
K	11	Octal	Mica Filled Phenolic (MFE)	1.172"
K21	12	Octal	Mica Filled Phenolic (MFE)	1.172"
P8L	8	Loctal	Mica Filled Phenolic (MFE)	1"
P7	7	Min.	Mica Filled Phenolic (MFE)	.582"
P9	9	Noval	Mica Filled Phenolic (MFE)	.710"
K1.334	7	Min., Hooked Pin	Mica Filled Phenolic (MFE)	.582"
K1.434	9	Noval, Hooked Pin	Mica Filled Phenolic (MFE)	.710"
K1.14	14	Noval Type	Mica Filled Phenolic (MFE)	.710"
K1.5	15	Eby, No. 9775-M		4-3/64" X 1-27/64"
K1.6	16	Amphenol Blue Line 4100 Series		49/64" X 1-53/64"
K1.61	24	Amphenol Blue Line 4100 Series		49/64" X 2-35/36"
K1.62	32	Amphenol Blue Line 4100 Series		49/64" X 3-19/64"
K1.71	12	Plus 2 Guide Pins, Elco Varicon		45/64" X 2-13/64"
K1.72	16	Plus 2 Guide Pins, Elco Varicon		45/64" X 2-51/64"
K1.73	14	Plus 2 Guide Pins, Elco Varicon		1-25/64" X 1-5/16"
K1.75	18	Plus 2 Guide Pins, Elco Varicon		1-25/64" X 1-31/64"
K1.8	15	Triad Header, Solder Mount		1-25/64"
K1.9	8	Triad Header, Solder Mount		49/64"
K1.01	8	Triad Octal Header, Solder Mount		61/64"

*Vector May Vary $\pm 1/64$ " For Better Fit.

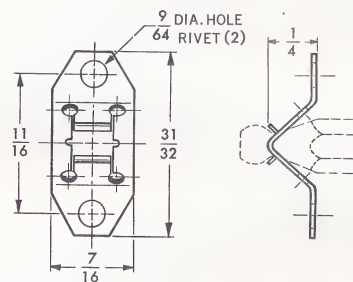
Sockets for the above plugs can be supplied or may be ordered from manufacturer.



LIP-LOC CASE WITH TYPICAL L-9 LOCK ASSEMBLY

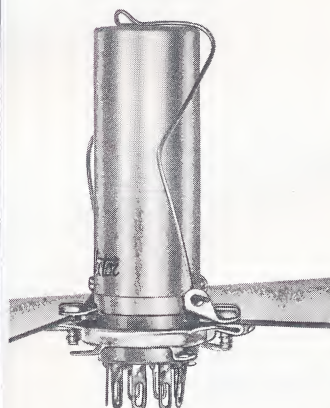


L-9 TYPE CATCH-BALL

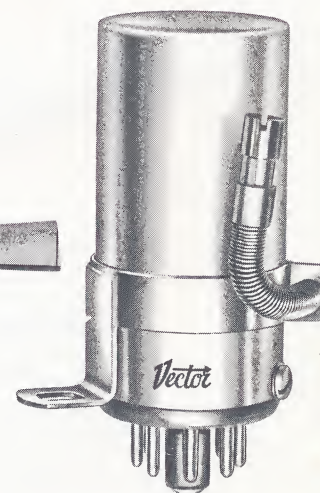


0911-3
CATCH

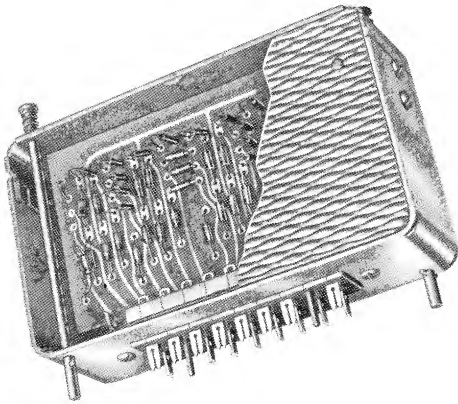
L-9
ASSEMBLY



G2.2 TYPE CASE
WITH L-18 LOCK



G2 TYPE CASE
WITH L-17 LOCK



MAXIMUM ACCESSIBILITY The FRAME-LOC case is a slender new flush type with snap-out side panels intended particularly for transistor circuitry and printed circuit boards in small pluggable units. The attractive case provides maximum accessibility to wiring, is light in weight, economical, and can be made in a wide variety of sizes and finishes.

SIDE PANELS SNAP OUT Two flat aluminum side panels lock into slots in the frame. Spring clips at the side snap in to hold the panels firmly. To remove side panels the upper corners are pushed outward with the finger-nail or blade of a knife. The side panels are rigidized aluminum in pleasing squared pattern (or plain). The frame of the case consists of two aluminum pieces joined with two screws.

IDEAL FOR PRINTED CIRCUITS Printed circuits can be neatly mounted on brackets connected to the frame of the case as shown in the illustration. Alternatively, Vector uniformly punched boards can be similarly mounted and wire easily, as can deck or post type terminal structures.

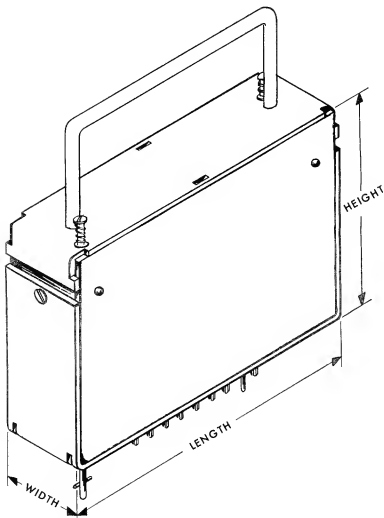
PLUGS AND LOCKS READILY ADDED These cases are also available with plugs, quarter turn locks, bails and internal terminal boards (see next page). Cases can also be punched to order for desired accessories where quantities justify a set-up charge.

Material Frame: Alum., Grade 5052H34/QQ-A-318 .062" thick.
Side Panels: Rigidized Alum., Grade 3003H14, approx. .040" thick.
Finish: None. Can be anodized per Mil-8625A to order in the following colors: Green, gray, red, blue, yellow, natural (clear), gold. (Extra charge for anodizing.)
Screws: No. 4-40 binder head cad. plated per AN-QQP-416, Type II, Class B or nickel plated per AN-P-34A.
Rivet: Brass, nickel plated per AN-P-34A.
Note: For military applications anodized finish is recommended.

Cases only, no plugs or internal structures.

Catalog No.	Width	Length	Height	Catalog No.	Width	Length	Height
H1.030-12	1	3	3	H1.530-12	1-1/2	3	3
H1.040-12	1	4	3	H1.540-12	1-1/2	4	3
H1.050-12	1	5	3	H1.550-12	1-1/2	5	3
H1.060-12	1	6	3	H1.560-12	1-1/2	6	3
H1.075-12	1	7-1/2	3	H1.575-12	1-1/2	7-1/2	3
H1.330-12	1-1/4	3	3	H2.030-12	2	3	3
H1.340-12	1-1/4	4	3	H2.040-12	2	4	3
H1.350-12	1-1/4	5	3	H2.050-12	2	5	3
H1.360-12	1-1/4	6	3	H2.060-12	2	6	3
H1.360-16	1-1/4	6	4	H2.075-12	2	7-1/2	3
H1.375-12	1-1/4	7-1/2	3				

PATENTED





Frame-Loc plug-in units are available as standard items with plug and case alone or as a combination of case, plug and internal wall structure. Varicon 16 pin plugs are standard mounted in the center of the long side of the frame. Others plugs, such as "Blue-Line" type, can be used and will be mounted to special order. See list of most used plugs, at bottom of page for choice.

SPECIFICATIONS

Case: Per previous page.

Plug: Varicon 16-pin (plus 2 guide pins). Grade MFE mica filled phenolic castings. Contacts, silver plated brass; saddle, cadmium plated steel.

Mounting Screws: Cadmium plated steel.

Terminal Panel: Epoxy paper laminate, exceeds XXXP quality, Ivory color, 3/32" thick. Uniform punched holes 0.093" diameter on 0.265" centers. (XXXX phenolic, glass-epoxy and glass silicone available to special order; see Bulletin No. 62.)

Terminals: None supplied. User may order Push-in Terminals No. T9.4 in vials of 100 (or bulk), or may use conventional turned terminals.

Brackets: Vector No. B23, brass, cadmium plated, eyeletted to terminal panel and screwed to Frame-Loc case.

ORDERING INFORMATION

FRAME-LOC PLUG-IN UNITS - CASE AND PLUG ONLY

<u>Catalog Number</u>	<u>Width</u>	<u>Case Dimensions</u>		<u>Height</u>
		<u>Length</u>		
H1.050-12K1.72	1	5		3
H.1350-12K1.72	1-1/4	5		3
H1.560-12K1.72	1-1/2	6		3
H1.575-12K1.72	1-1/2	7-1/2		3
H2.060-12K1.72	2	6		3

FRAME-LOC PLUG-IN UNITS - WITH PLUG & TERMINAL PANEL

Catalog Number	Case Dimensions			No. of Holes in Terminal Strip	STRIP Dimensions
	Width	Length	Height		
H1.040-12K1.72-4	1	4	3	13 x 9	3.48 x 2.42
H1.050-12K1.72-4	1	5	3	17 x 9	4.54 x 2.42
H1.060-12K1.72-4	1	6	3	21 x 9	5.60 x 2.42

VARIATIONS AND ACCESSORIES

Many variations can be obtained from the factory. In quantities of 25 or over, no set-up charge is made for standard sizes. Modifications available include:

Plugs which will be installed to order where space permits:

Catalog Number	Type	No. Pins	Minimum Case Length	Catalog Number	Type	No. Pins	Minimum Case Length
K*	Octal	11	3	K1.61	Amph. Blue Line	24	4
K1*	Octal	8	3	K1.62	Amph. Blue Line	32	5
K1.1*	Octal	9	3	K1.71	Elco Varicon	12 + 2 guide pins	4
K1.3	Vector Min.	7	1	K1.72	Elco Varicon	16 + 2 guide pins	4
K1.4	Vector Noval	9	1	K1.74	Elco Varicon	20 + 2 guide pins	4
K1.6	Amph. Blue Line	16	4				

*May be used only for case widths of 1-1/2" or more.

Sockets: For tube circuit applications, provisions can be made for mounting tube sockets in the Frame-Loc case. Refer to factory.

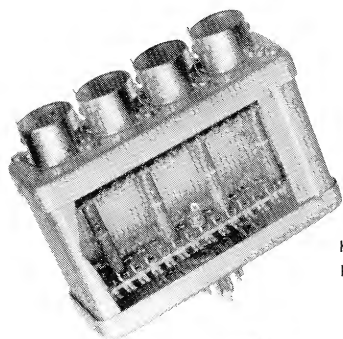
Deck Type Internal Structure (or Vector Post or Special Wall Type): available in wide variety of sizes. Refer to factory.

Frame-Loc units can be supplied with hardware for mounting printed circuit or other internal structure plus any other feature or combination of features described above. Contact factory.

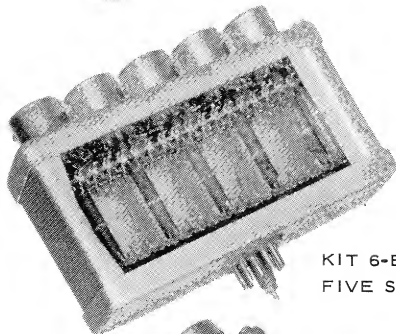
Locks
(See Sect. V, Pg., 5 & 6)

Catalog No.	L	L9	L15
Type	Quarter-Turn Handle	Catch-Ball	Quarter-Turn (Screw-driver head)

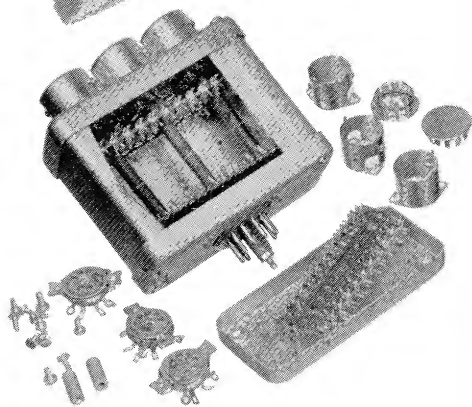
Bails can also be supplied to special order.



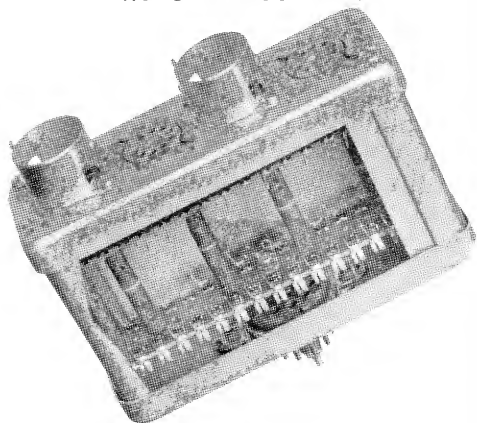
KIT 5-E2K3 UNIT
FOUR SOCKETS



KIT 6-E1K3 UNIT
FIVE SOCKETS



KIT 4-EK3
ASSEMBLED UNIT AND
INCLUDED ACCESSORIES



TOP OF KIT 5-E2K3 UNIT
SHOWING SLOTS IN SOCKET HOLES FOR
ACCOMMODATING 7 OR 9 PIN SOCKETS

PATENTS

ASSEMBLE THE TYPE YOU NEED

These flexible assemblies provide simple readily wired packages utilizing LIP-LOC cases and Deck-Turrets which may be arranged to mount many circuit assemblies. For example, Kit 4-EK3 may be set up to mount 1 to 3, 7 or 9 pin miniature sockets in any order using adapter rings to accommodate different socket diameters. Socket holes are $\frac{3}{4}$ " diameter with slots for saddle screws. Plug buttons are supplied to close socket holes where tubes are not required. (If octal sockets are required, holes can be enlarged by customer.) 7 or 9 pin sockets and an equal number of JAN type shield bases of each type are supplied. An extra undrilled plug base is supplied so that larger plugs such as the "Blue-Line" may be mounted. (Latter is not supplied but spacers & screws for this are included.)

SPECIFICATIONS

Finish is caustic etch on aluminum. Sockets are mica filled phenolic, commercial grade; terminal strips and spacers are phenolic. Adapter rings to mount 7 pin sockets are furnished. Two Deck type strips with ZIP terminals are assembled with 9 pin sockets and 11 pin octal type plug into case. One extra third deck is supplied as a loose part which may be easily inserted in the stack if desired. Terminal decks are of grade XXXP phenolic punched with an "all-over" pattern of .093" diam. holes (Pattern A) 0.265" on centers. Strips are 0.84" wide and range in length from 2-7/8" for kit 4 to 5-1/16" for kit 6. Overall height of all units is 3".

ORDERING INFORMATION

Kit Number	Sockets	Base Dimensions	Deck Spacing (2 Decks)	No. Terms. per Deck
Kit 4-EK3	3N or 3M	1 $\frac{5}{8}$ " x 3 $\frac{7}{8}$ "	1 $\frac{1}{16}$ "	22
Kit 5-E2K3	4N or 4M	1.68" x 4.81"	1 $\frac{1}{16}$ "	30
Kit 6-E1K3	5N or 5M	1 $\frac{5}{8}$ " x 5 $\frac{7}{8}$ "	1 $\frac{1}{16}$ "	38

Units are supplied with 2-deck assembled internal structure having split spacers so that extra third deck may be inserted easily if desired. Side ZIP terminals are installed along the longer sides of all strips

These terminals provide serrated forks onto which components may be pushed and securely held. Cross straps and Riser wire holes are also provided making for quick, easy assembly. Plating is fused tin for top solderability. Components will normally be mounted from deck to deck but they may also be mounted across each deck. Case consists of 4-piece standard LIP-LOC construction which is readily disassembled by removing 2 corner screws and 2 screws at the plug. Shield bases screw onto the socket saddles if needed. Where locks are desired, Vector Type L9 is suggested accessory.



TUBE BASE PLUGS

Vector Tube Base Plugs fit the 7-pin miniature, 9-pin noval, 8-pin octal and 14-pin relay sockets. Plugs may be mounted in three ways:

1. With a 4-40 or 5-40 screw through the center of the plug. (All except the 14-pin plug).
2. With a Tru-Arc retainer ring in a plate or chassis. Retainer rings and grooved plugs are indicated by adding "R" or "P" in the catalog number.
3. Round shells may be attached by the addition of knurl nuts recessed in the periphery of the plug (two 1-72 nuts are used in each 7, 9 or 14-pin plug if specified).

4. Mounting saddles having overall dimensions as shown in Fig. 1 are available. B36-4 fits 7-pin plugs, B37-4 fits 9-pin plugs and B38-2 fits 14-pin plugs. These clamp the respective plugs in a chassis hole. Key positions are such that sockets will mount with axis at 45° to long axis of the bracket. The material is aluminum.

ORDERING INFORMATION

Cat. No.	Type	Centerpost	Keyway	Dimensions		
				A	B	C
P7	7-pin Min.	yes	yes	17/32	.620	.575
P9	9-pin Noval	yes	yes	17/32	.750	.700
P7A	7-pin Min.	yes	yes	3/16	.620	.575
P9A	9-pin Noval	yes	yes	3/16	.750	.700
K1.302	7-pin Min.	no	yes	17/32	.620	.575
K1.402	9-pin Noval	no	yes	17/32	.750	.700
K1.334	7-pin Hooked	no	yes	3/16	.620	.575
K1.434	9-pin Hooked	no	yes	3/16	.750	.700
K1.313	7-pin Min.	no	no	3/16	.620	.575
K1.321	7-pin Min.	yes	no	1"	.620	.575
K1.413	9-pin Noval	no	no	3/16	.750	.575
K1.421	9-pin Noval	yes	no	1"	.750	.575
P8L	8-pin Loctal	yes	yes	13/32	1 5/32	1.000
K1.14	14-pin	no	yes	17/32	.750	.700
* KVG1.302	7-pin Min.	no	yes	17/32	.620	.575
* KVG1.303	7-pin Min.	no	no	17/32	.620	.575
* KVG1.402	9-pin Noval	no	yes	17/32	.750	.700
* KVG1.403	9-pin Noval	no	no	17/32	.750	.700

VARIATIONS

Add "F" after "P" or "K" in catalog number for 1-72 knurl nuts in 7, 8 and 9-pin plugs without keyways, and to 14-pin plugs with keyways.

Add "R" after "K" in catalog number for retainer rings in plugs without knurl nuts.

Add "G" after "K" or "P" in catalog number for silver plate, gold flash plug-pins, except stock plugs marked with an *.

SPECIFICATIONS

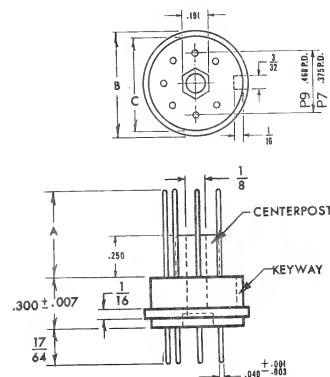
Plug Casting: Mica filled Phenolic, grade MFE as per MIL-P14.

Plug Pins: Phosphor Bronze, Cadmium Plated.

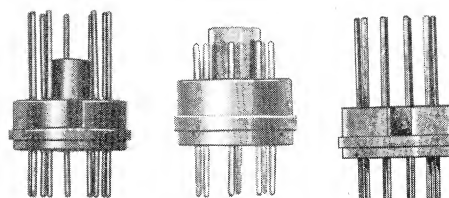
*Plug Pins: Heat treated Beryllium Copper, Silver Plated with Gold Flash.

Note: Special plugs molded for high temperature applications made to order with set-up charge.

MOUNTING SADDLES		HOLE DIA. "A"	SOCKET FOR 14-PIN PLUG
CAT. NO	FOR PLUGS		CAT. NO. R14J
B 36-4	7-PIN	.585	Casting; Mica Filled Phen. Grade
B 37-4	9-PIN	.710	MFE per MIL-P-14 - Contacts: Phos.
B 38-2	14-PIN	.710	Bronze Silver Pltd.- Saddle: Steel,
			Cadmium Pltd.



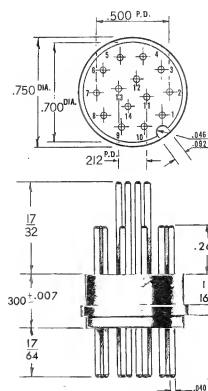
P 7 AND P 9



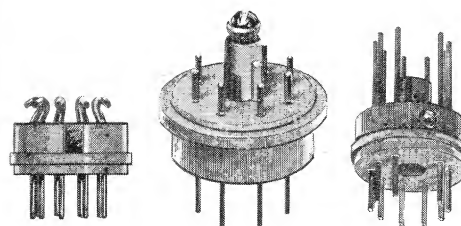
p 9

P 9A

KI.402



KI.14



KI.434

P 8 L

KI.421

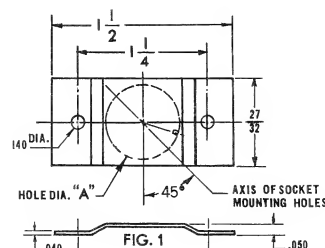
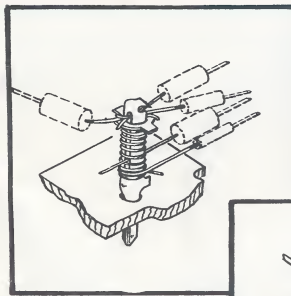
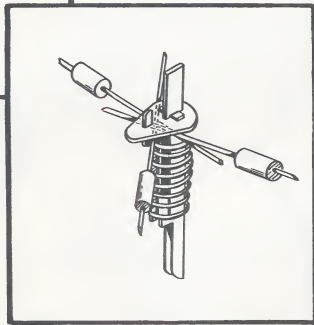


FIG. 1
MOUNTING SADDLE

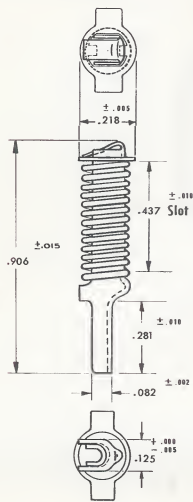


T30-2 (PATENTED)

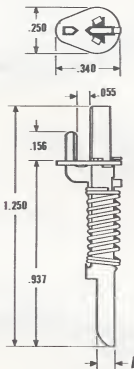
New



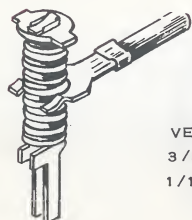
T32 (Pat. Pending)
SIDE ENTRY U-CLIP



T30N-2 (DETAIL DWG.)



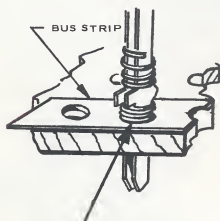
T32, T32-1
DETAIL DWG.



T30N-2 SPRINGCLIP AND
CONNECTED PATCH-CORD



P92A INSERTION TOOL



T64 SPRING
CONTACTS BUS STRIP



RETAINER WASHER HD2.1

FAST RELIABLE CIRCUIT SET - UPS WITHOUT SOLDERING

Vector SPRINGCLIP Terminals provide reliable means for quickly connecting or disconnecting as many as six component wires without need for soldering, crimping or bending of wires. Expensive components like transistors may be used over and over by merely pulling the leads out of the SPRINGCLIP. No messy, time-consuming unsoldering to salvage components, and no risk of burning up" expensive components like sensitive transistors and diodes with excessive solder heat.

TWO TYPES AVAILABLE

The widely used original SPRINGCLIP, No. T30N-2, has a slotted post into which wires may be pushed when the spring is depressed (or wires may be wrapped around the post between coils of the spring). This terminal requires a 3/32" diameter hole. The new T32 series SIDE ENTRY U-CLIP differs in that a slotted plunger is used which, when depressed, opens the slot so that wires may be laid in without threading thru. The new type is somewhat more expensive than the original Springclip since it has one extra part increasing fabrication cost. The T32A and T32 U-Clips fit 3/32" diameter holes (Vectorbord pattern AA). The T32A-1 and T32-1 fit 1/16" diameter holes of Vectorbords "F", "G" and "H".

Wires may enter the T32A U-Clip from various directions since the plunger slot with bevelled edges overhangs the periphery of the post. In this way wires perpendicular to each other may enter the slot and by criss-crossing provide optimum contact pressure. The T32A should generally be mounted with the slot axis at 45° to the most used direction of wire entry so that leads go thru diagonally as shown in the figure.

ECONOMICAL - MAY BE USED OVER AND OVER

SPRINGCLIPS cost little initially and may be used over and over without limit. They are ready to use immediately upon being pushed into holes with the fingers or the P92A insertion tool. Staking is not necessary since the terminal holds snugly by means of the springy action of the formed U shape end. However, if staking is required, it can be accomplished by flaring the end underneath the insulating board. Another method is to slip a retainer washer, Catalog Number HD2.1 over the post end of the terminal against the underside of the insulating board. Experimenter patch cords are available having U shaped tips which plug into the coils of the Springclips as shown in the figure. (See Page 6 of Section X for further details.) Bus strips may be used to connect SPRINGCLIPS in multiple (see Section IX, Page 4). A small spring, T64, is an available accessory to insure connection between the bus strip and the SPRINGCLIP. It slips over the leg of the terminal before pushing it into the bus strip and the board hole. (See Fig.)

SPECIFICATIONS

PART	MATERIAL	FINISH
TERM. POST	BRASS, HALF HARD	SILVER PLATED OR NICKEL
PLUNGER	BRASS, HALF HARD	SILVER PLATED OR NICKEL
WASHER	BRASS, HALF HARD	SILVER PLATED OR NICKEL
SPRING	STEEL MUSIC WIRE	SILVER PLATED OR NICKEL

CONTACT RESISTANCE AS LOW AS .002 OHMS BETWEEN LEADS AND SILVER PLATED SPRINGCLIP, AND .0016 OHMS FOR NICKEL PLATED SPRINGCLIP.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PACKAGE QTY.
T30-2	SPRINGCLIP TERMINAL SIL. PLTD.	PKG. X:10, C:100, M:1000
T30N-2	SPRINGCLIP TERMINAL NICKEL PLTD.	PKG. X:10, C:100, M:1000
T32	SIDE ENTRY U-CLIP SIL. PLTD.	PKG. X:10, C:100, M:1000
T32A	SIDE ENTRY U-CLIP NICKEL OR TIN PLTD.	PKG. X:10, C:100, M:1000
T32-1	SIDE ENTRY U-CLIP SIL. PLTD.	PKG. X:10, C:100, M:1000
T32A-1	SIDE ENTRY U-CLIP NICKEL OR TIN PLTD.	PKG. X:10, C:100, M:1000

P92A	INSERTION TOOL FOR T30 & T32 SERIES TERMINAL	PKG. 1
HD2.1	RETAINER CLIP	PKG. L:50
T64	SPRING FOR USE WITH BUS STRIP	PKG. L:50

PATCH-CORDS SEE SECTION X, PAGE 6.

PUSH-IN TERMINALS

Vector T9.4 Series Push-In Terminals may be quickly pushed into insulated boards having 0.093" diameter holes, using the P122 Insertion Tool or the P21-6 long nose pliers. The Push-In holds snugly because of the springy action of the formed U shaped end.

The T9.4 Terminal has serrations on the main slot, while the T9.4A does not. (See Figs. 1 & 2). The T9.4 holds wires of .032" to .040" diameter firmly in the serrated slots without soldering, providing only one wire at a time is placed there. Other wires may be placed in the side slot or soldered to the leg. Experimenters who solder may prefer the T9.4A because the leads may be more easily slipped out when unsoldering the connections. At right angle to the main slot is a side slot which may be used to grip other small wires. Riser wires .040" diameter coming up through the terminal leg do not interfere with cross wires in the main slot. Round type AMP taper pins also fit snugly into the hole.

The T9.6 Push-In Terminal is a slightly longer terminal than the T9.4 (See Fig. 4), made of beryllium copper for greater strength and springiness.

TANDEM TERMINALS

Tandem T9.6 terminals are joined together across the top and are used for common junctions (See Fig. 6). Tandems of 2, 3 or 4 are available in stock, or any number of tandems to order.

STAKING

Staking, if desired, may be accomplished as follows: 1. Round nose pliers P21-6 pressed into the U shaped end will flare the sides and lock the terminal in position. 2. Insert the cutting edge of diagonal cutters across the end and simultaneously cut off and flare the sides.

SPECIFICATIONS

MATERIAL:

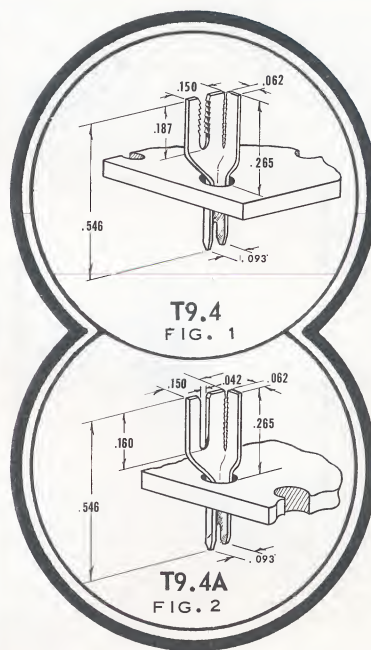
T9.4 SERIES-.016" HALF HARD BRASS,
TIN PLATED.

T9.6 SERIES-.016" THICK BERYLLIUM COPPER
TIN PLATED.

MOUNTING HOLES .093" DIA.±.002". TANDEM TERM. SPACING .265"

ORDERING INFORMATION

T9.4	PUSH-IN ZIP TERMINAL WITH SERRATED MAIN SLOT
T9.4A	PUSH-IN ZIP TERMINAL WITH SMOOTH MAIN SLOT
T9.6	PUSH-IN ZIP TERMINAL, SERRATED
T9.62	TANDEM PUSH-IN TERMINALS, 2 UNITS
T9.63	TANDEM PUSH-IN TERMINALS, 3 UNITS
T9.64	TANDEM PUSH-IN TERMINALS, 4 UNITS
P122	INSERTION TOOL FOR T9.4, T9.4A AND T9.6
P21-6	STAKING PLIERS



VECTOR P122 FOR T9.4 - T9.6 TERMS.

P122
INSERTION
TOOL

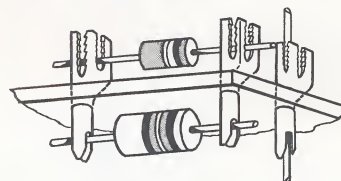
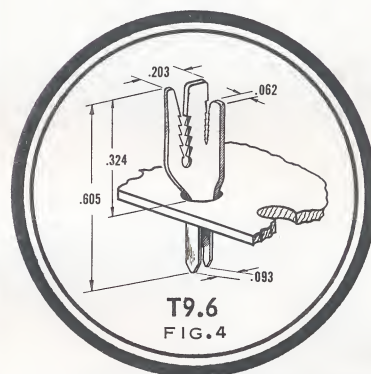


FIG. 3 T9.4



T9.6
FIG. 4

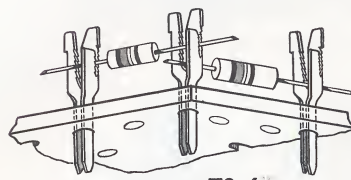


FIG. 5 T9.6

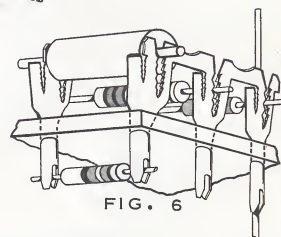


FIG. 6

PATENTED

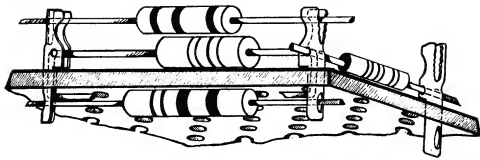


FIG. 1

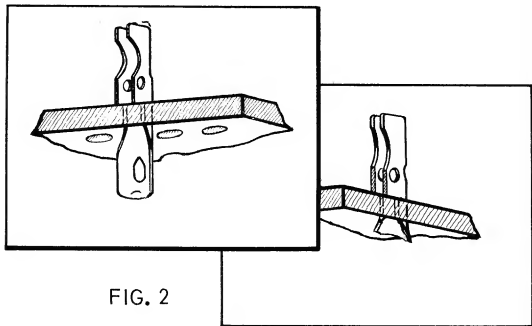
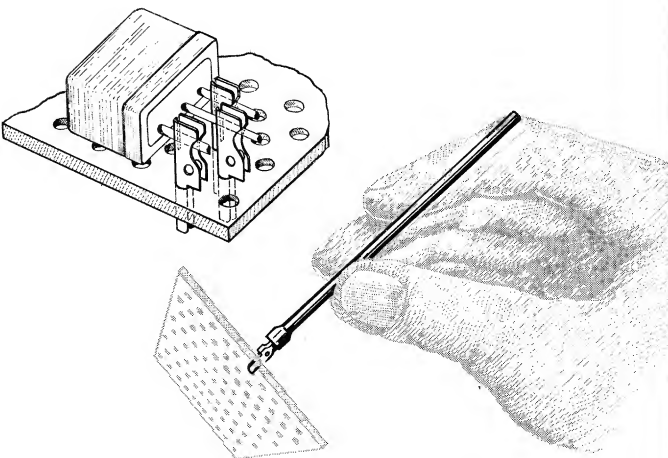
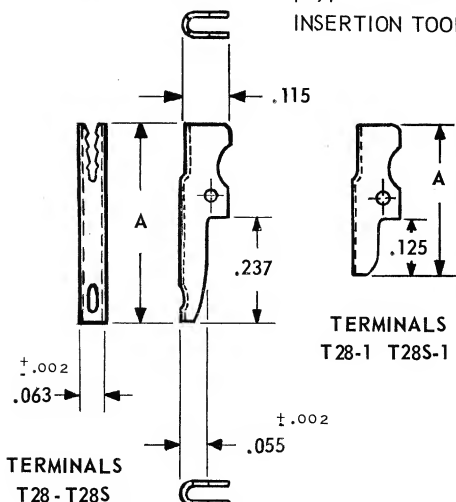


FIG. 2

FIG. 3



P-91
INSERTION TOOL



TERMINALS TO FIT .062 DIA. HOLES

The T28 Push-in Terminal is a very small contact designed for miniature circuitry where the well known T9.4 Push-in might be too large. It is easily inserted into 1/16" round holes and needs no staking operation. Ideal for the experimenter, it is also well suited for use in printed circuits and other production applications.

DESIGNED FOR COMPACT ASSEMBLIES

1. Low Cost: The T28 Push-in is stamped from beryllium copper sheet, heat treated, silver or tin plated. This provides strength and springy action. It is priced below turned type terminals and may be re-used, if desired, by pulling it out of the board.

2. Compactly Designed - Yet Holds Up To Six Leads: The T28 looks neat; yet, using upper and lower portions, as many as six leads may be connected to it in the three possible directions. See Fig. 1. Notice the serrations in the main slot which grip small component leads, including transistor leads.

3. Optional Hand Staking Possible: Although no staking is required, the terminal may be staked if desired. Fig. 2 illustrates one staking method. Here the small end of the terminal has been flared using "flats" or needle nose pliers. This prevents it from pulling out. (see Fig. 3) After flaring, the small end of the terminal may be cut with a pair of cutting pliers.

Fig. 3 illustrates how the tab can be simultaneously flared adjacent to the board and cut off by use of the usual diagonal cutting pliers.

4. Easily Inserted: Terminals can be inserted by use of a 1/2 or 1 w. resistor with the wires cut about 9/16" long on one side and entirely off on the other side. The short wire is inserted in the terminal and on through the hole. A special tool, Vector P-91, is available which is better and may be used either by hand or it may be inserted in a drill press or arbor press for more convenient operation. Vectorbord Type B, E, F or G is recommended for use with this terminal.

SPECIFICATIONS

CAT. NO.	DESCRIPTION	MATERIAL	PLATING	STD. PKG.
T28 T28-1	PUSH-IN TERMINAL	BERYLLIUM COPPER HEAT TREATED	TIN	BAGS OF 100 BULK, 1000 & OVER
T28S T28S-1	PUSH-IN TERMINAL	BERYLLIUM COPPER HEAT TREATED	SILVER PLATED	BAGS OF 100 BULK, 1000 & OVER
P-91	INSERTION TOOL FOR T28 SERIES	STEEL	CADMIUM PLATED	

VECTOR ELECTRONIC CO., INC.

1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

TWX 213-240-2162

Vector

EYELETS FOR CIRCUIT BOARDS

Rolled Flange and Funnel Flange eyelets are useful for a variety of circuit connection applications, especially in conjunction with Vec-torbord, the pre-punched terminal board shown in Sec. II, Pgs. 1-4.

ROLLED FLANGE EYELETS

The T15 series of eyelets is used with .062" diameter holes; the T7 series with .093" diameter holes.

SPECIFICATIONS: Eyelets are brass with a fused tin finish and can be supplied with other finishes or without finish to special order.

CAT. NO.	DIA. 'A'	DIA. 'B'	LGTH. 'C'	METAL THKNS.	NOM. ID	DRILL SIZE	BOARD THKNS.
T15.22	.059	.105	.062	.007	.042	1/16	—
T15.23	.059	.105	.093	.007	.042	1/16	1/16
T15.24	.059	.105	.125	.007	.042	1/16	3/32
T15.26	.059	.105	.187	.007	.042	1/16	—
T15.27	.059	.105	.219	.007	.042	1/16	—
T7.33	.089	.150	.093	.009	.068	3/32	1/16
T7.34	.089	.150	.125	.009	.068	3/32	3/32
T7.35	.089	.150	.156	.009	.068	3/32	1/8
T7.36	.089	.150	.187	.009	.068	3/32	—
T7.37	.089	.150	.219	.009	.068	3/32	—
T7.39	.089	.150	.281	.009	.068	3/32	—

Standard Packages: 1000 or 5000.

FUNNEL FLANGE EYELETS

These eyelets provide a superior electrical connection for printed circuit boards, with an excellent affinity for solder. The eyelet is designed for good solder fillets, faster insertion of leads, and elimination of flux trapping so that solder flows evenly around the setting.

SPECIFICATIONS: Material is brass or copper as listed, with a fused tin finish. (See table). Terminals supplied without finish or with other finishes to special order. Standard packages: 1000 or 5000.

CAT. NO.	DIA. 'A'	DIA. 'B'	LGTH. 'C'	METAL THKNS.	NOM. ID	DRILL SIZE	BOARD THKNS.	MAT.
TF15.23	.059	.095	.088	.006	.047	.062	1/16	BRASS
TF15.24	.059	.095	.125	.006	.047	.062	3/32	BRASS
TF2.23	.047	.080	.093	.006	.035	.052	1/16	COPPER

FLAT FLANGE EYELET - Eyelets for .025" and .040" dia. pins. Material: Copper, Cadmium plated.

CAT. NO.	DIA. 'A'	DIA. 'B'	LGTH. 'C'	METAL THKNS.	NOM. I.D.	DRILL SIZE	BOARD THKNS.	MAT.
T102	.052	.080	.105	.006	.040	.059	1/16	COPPER
T103	.036	.071	.062	.006	.025	.11	1/32	COPPER

STAKING TOOLS FOR EYELETS

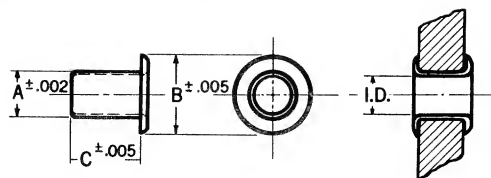
Hand staking pliers stocked for installing listed rolled flange eyelets.

CAT. NO.	DESCRIPTION
P-96	Pliers for Rolled Flange Eyelets, 12" L. with 3-1/8" Throat Depth
P-96A	Anvil & Set Die used with pliers. (.059" eyelet barrel diameter)
P-96B	Anvil & Set used with pliers. (.089" eyelet barrel diameter)
P-125	Pliers w/anvil and die set for .059" dia. eyelets - 7/8" throat
P-126	Pliers w/anvil and die set for .089" dia. eyelets - 7/8" throat

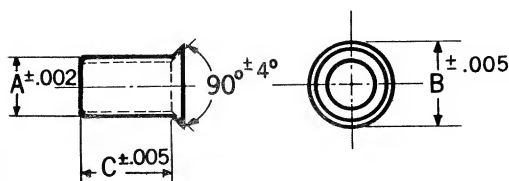
STAKING TOOLS FOR PRESSES

Machine or press staking tools consisting of the Anvil and Spindle and the Set Die are stocked for both the rolled flange and the funnel flange eyelets. The tool shank diameter is 1/2" and may be used in a drill press, or any device which provides the necessary action.

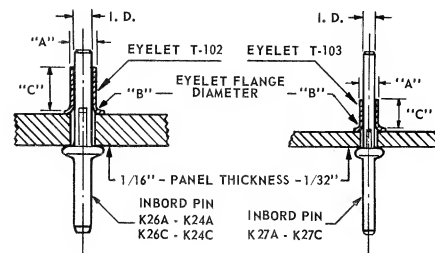
CAT. NO.	DESCRIPTION
P-109	Set for T15 series, rolled flange eyelet. (.059" eyelet barrel dia.)
P-110	Set for T7 series, rolled flange eyelet. (.089" eyelet barrel dia.)
P-111	Set for TF15 series, funnel flange eyelet. (.059" eyelet barrel dia.)
P-112	Set for TF2 series, funnel flange eyelet. (.047" eyelet barrel dia.)



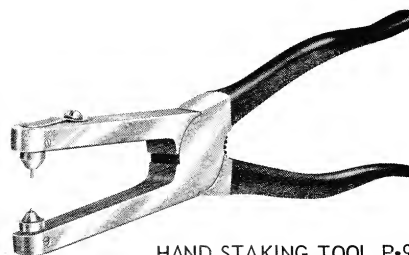
ROLLED FLANGE EYELETS



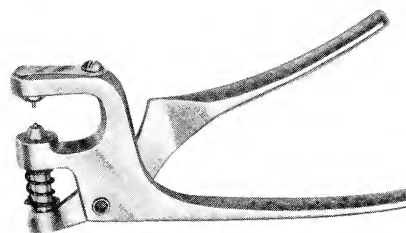
FUNNEL FLANGE EYELETS



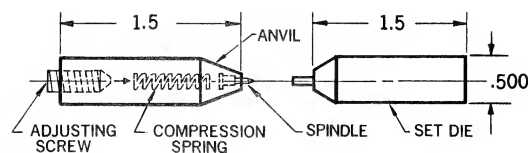
FLAT FLANGE EYELETS
FOR EDGE-PIN ATTACHMENT



HAND STAKING TOOL P-96
PLUS ANVIL AND SET DIE



HAND STAKING TOOL P-125
LOW COST TYPE



MACHINE STAKING TOOL

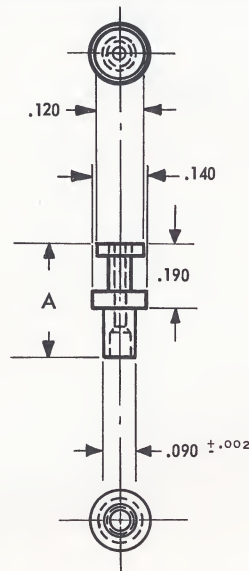
TERMINALS TO FIT .093 DIA. HOLES

TERMINALS

VECTOR TERMINALS ARE LISTED FOR BOTH .093" DIAMETER OR .062" DIAMETERS HOLES. MOST TERMINALS ARE OFFERED IN TWO SIZES FOR USE WITH 1/16" OR 3/32" BOARD THICKNESS.

STAKING TOOLS

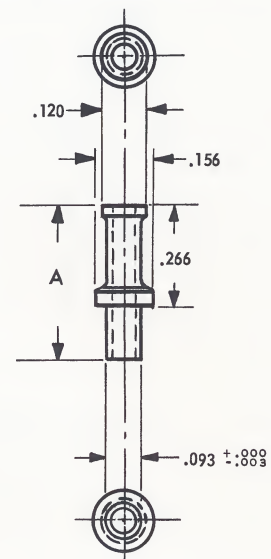
FOR PROPER STAKING, APPROPRIATE STAKING TOOLS ARE LISTED WITH RESPECTIVE TERMINALS. TOOLS FIT ANY PRESS ACCOMODATING 1/4" SHANK. TOOLS MAY BE ORDERED FROM VECTOR ELECTRONIC CO., INC.



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T5.0	.299	1/16"
T5.1	.330	3/32"

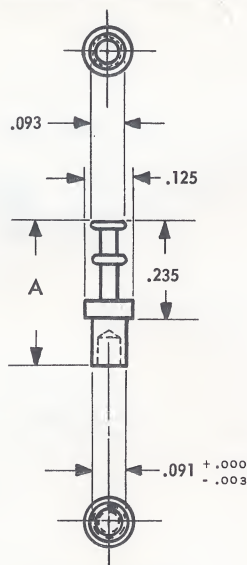
ORDER P119 STAKING TOOL.



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T10	.371	1/16"
T10.1	.401	3/32"

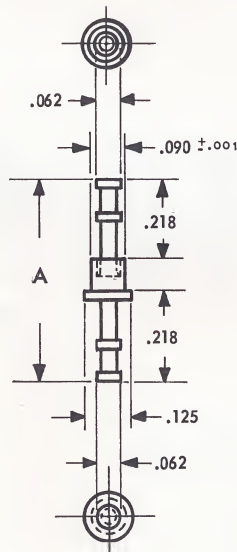
ORDER P121 STAKING TOOL.



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T11	.340	1/16"
T11.1	.370	3/32"

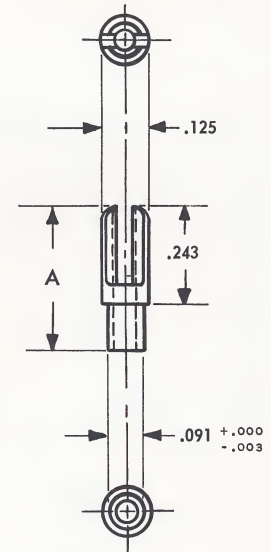
ORDER P100 STAKING TOOL.



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T13	.520	1/16"
T13.1	.551	3/32"

ORDER P101 STAKING TOOL.

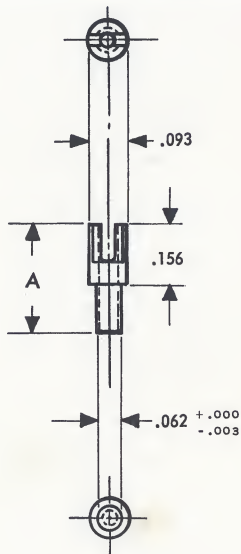


BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T14	.348	1/16"
T14.1	.378	3/32"

ORDER P102 STAKING TOOL.

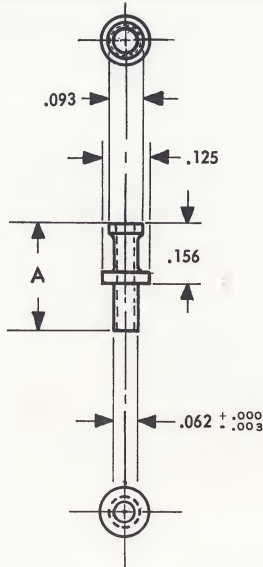
TERMINALS TO FIT .062 DIA. HOLES



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T18	.240	1/16"
T18.1	.271	3/32"

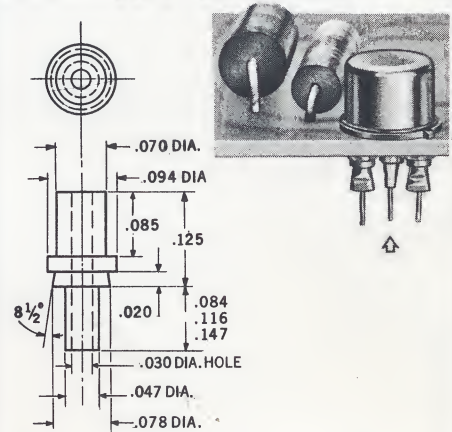
ORDER P103 STAKING TOOL.



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
TJ9	.240	1/16"
T19.1	.271	3/32"

ORDER P104 STAKING TOOL.

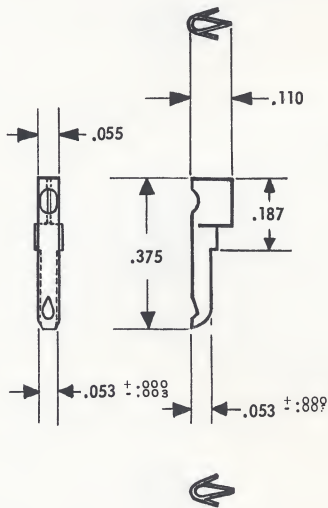


TRANSCIMP TERMINAL FOR TRANSISTOR AND DIODE LEADS ELIMINATES HEAT DAMAGE TO LEADS. RELIABLE CRIMPED CONNECTION.

BRASS, NICKEL PLATE GOLD FLASH.

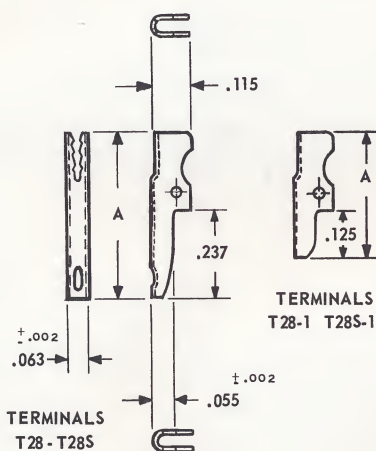
CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T40-2	.209	1/16"
T40-3	.241	3/32"

WRITE FACTORY FOR STAKING AND CRIMPING TOOL INFORMATION.



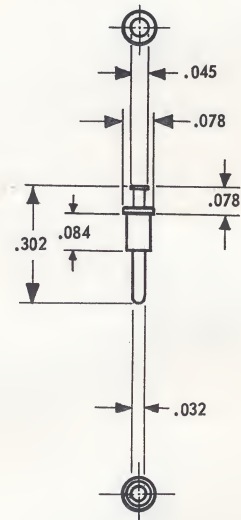
BERYL. COPPER, SILVER PLTD.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T27	.375	ANY



CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T28	.437	ANY
T28-1	.325	1/16 - 3/32
T28S	.437	ANY
T28S-1	.325	1/16 - 3/32

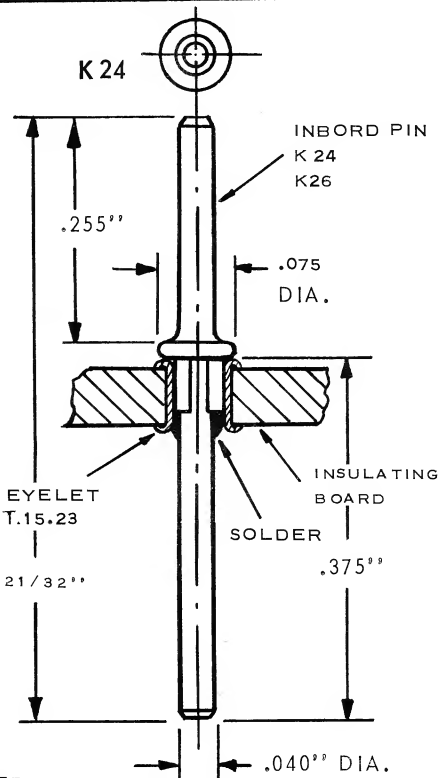
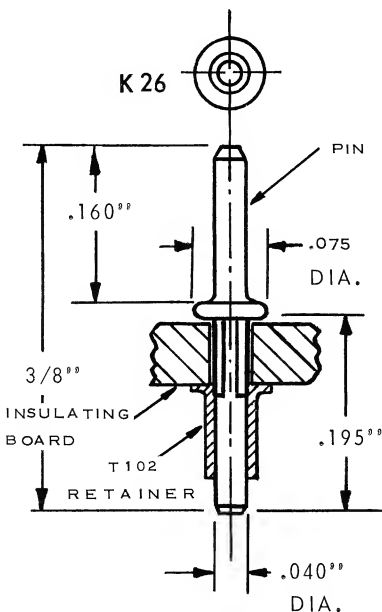
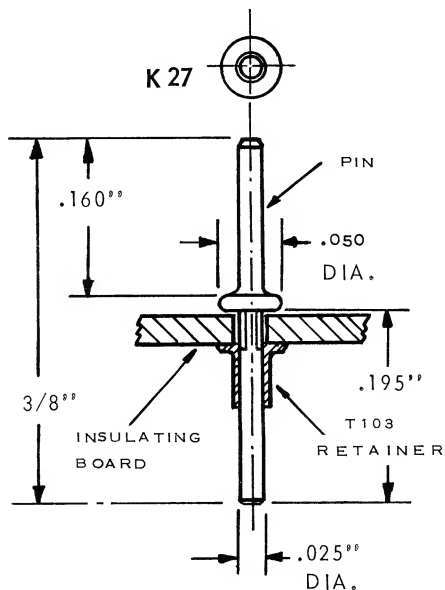
BERYL. COPPER, SILVER PLTD.
* ORDER P91 HAND INSERTION TOOL.
See Sect. VII, Page 3 for complete description.



BRASS, SILVER PLATED.

CATALOG NUMBER	LENGTH (A)	for BOARD THICK.
T29	.302	1/16"

ORDER P113 STAKING TOOL.



MATERIAL: INBORD PINS - PHOSPHOR BRONZE GRADE A
RETAINER - COPPER, TINNED

USE: **A.** PINS PRESS FIT .025" AND .042" HOLES IN INSULATING BOARD. KNURLED BODY FLANGE CUTS INTO INSULATING BOARD AND LIGHTLY HOLDS PIN.
FOR PERMANENCY RETAINER MAY BE PRESSED ON OPPOSITE END AND SOLDERED.

B. PINS K24A AND K24C MAY BE USED IN 1/16" DIAMETER HOLE BY USING T 15.23 RETAINER AS ILLUSTRATED ABOVE.

ALTERNATE MOUNTING METHOD
K24 PIN IN .062" HOLE USING
RETAINER T15.23

FOR .025" HOLES

PIN CAT. NO. AND DESCRIPTION				RETAINER & EYELET	DIMENSIONS				CATALOG NUMBERS		
CATALOG NO. (TINNED)	CAT. NO. NICK. PL. & GOLD FLASH	DIAM.	OVERALL LGTH.	CATALOG NUMBER	I. D.	O. D.	LGTH.	FLANGE DIAM.	EYELET TOOL*	PIN HOLDER	RETAINER HOLDER
K27C (TINNED)	K27A	.025"	3/8"	T103	.025"	.036"	.062"	.071		P-132	P-131

FOR .040" HOLES

K24C (TINNED)	K24A	.040"	5/8"	T102	.040"	.052"	.105"	.080"		P-134	P-133
K26C (TINNED)	K26A	.040"	3/8"	T102	.040"	.052"	.105"	.080"		P-134	P-133

FOR .062" HOLES

K24C (TINNED)	K24A	.040"	5/8"	T15.23	.042"	.059"	.093"	.105"	P-109 OR	P-134	P-133
K26C (TINNED)	K26A	.040"	3/8"	T15.23	.042"	.059"	.093"	.105"	P96 W/P96A OR P125	P-134	P-133

* SEE SECTION VII, PAGE 4 FOR COMPL. SPECIFICATIONS.

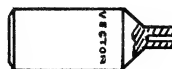
PRICES

INBORD PIN	BAG OF 50	1-4 M	5-9 M
K 24A	1.25	18.00/M	16.20/M
K 24C	.75	9.80/M	8.82/M
K 26A	.80	11.50/M	10.35/M
K 26C	.60	7.50/M	6.75/M
K 27A	.75	9.75/M	8.75/M
K 27C	.60	6.75/M	6.00/M

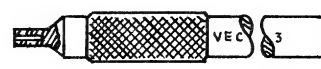
PRICES

RETAINER	BAG OF 100	1-4 M	5-9 M
T 102	1.25	4.00/M	3.75/M
T 103	.75	9.00/M	8.10/M

LOWER PART
P-132 P-134



UPPER PART
P-131 P-133

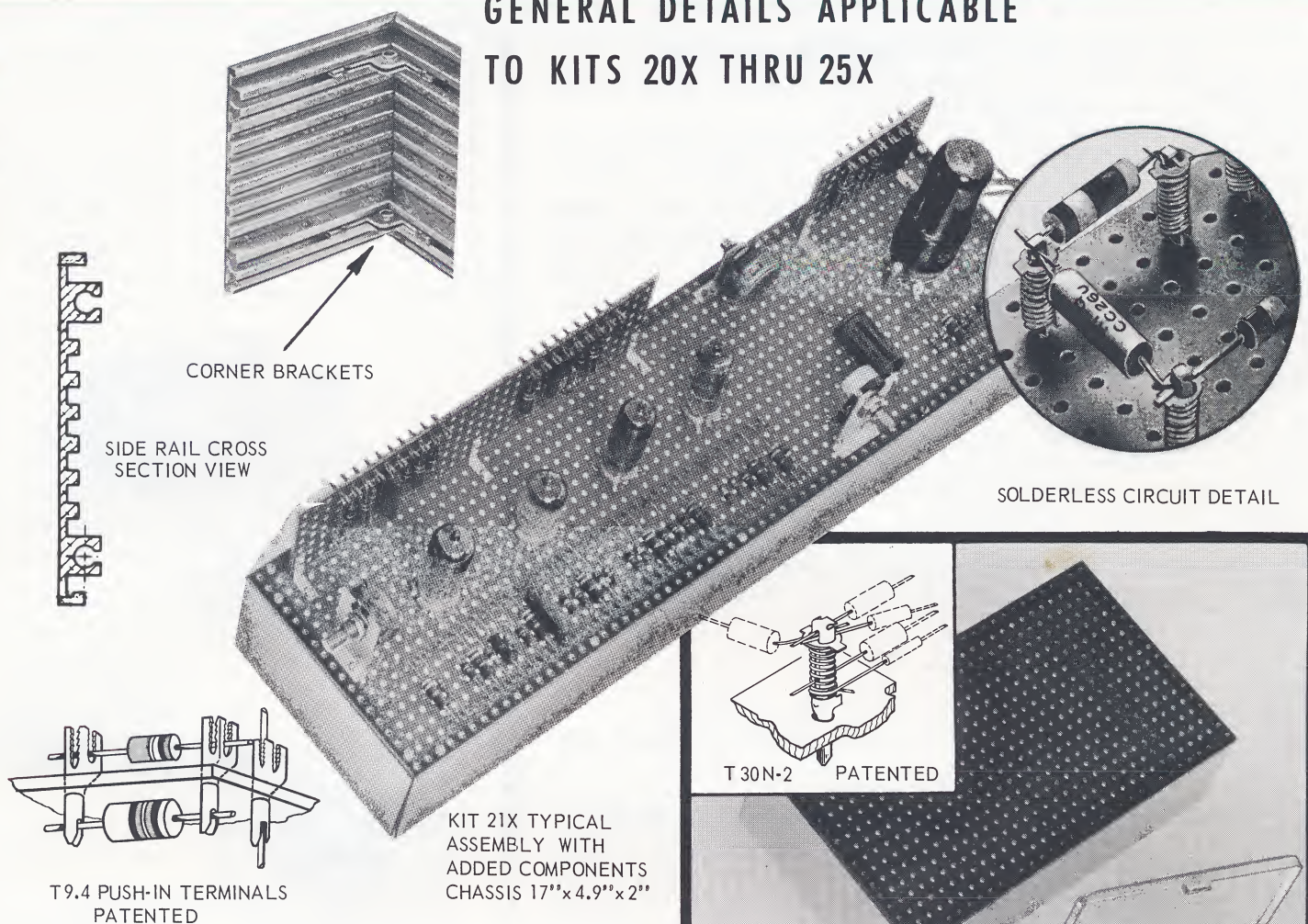


APPLICATION: INBORD PINS FUNCTION AS (A) COMPONENT TERMINALS FOR MICRO-VECTORBOARD (SEE SECT. II) AND MICRO-PLUGBOARD (SEE SECT. IV) OR (B) AS MALE CONNECTOR PINS. INBORD PINS WITH .040" DIAM. FIT CUP RECEPTACLES (SEE SECTION IV, PAGE 11) PINS WITH .025" DIAMETER FIT RECEPTACLES MADE BY AUGAT CORP.

INSTALLING TOOL FOR INBORD PINS
AND RETAINERS

USED WITH			TITLE	PART NO. OR REF.	ISSUE
			INBORD PIN - TERMINALS & RETAINERS		
DATE	4-13-65		VECTOR ELECTRONIC CO. GLENDALE CALIF.	DRAWING NO. R-466-65-6	

GENERAL DETAILS APPLICABLE TO KITS 20X THRU 25X



CORNER BRACKETS

SIDE RAIL CROSS
SECTION VIEW

SOLDERLESS CIRCUIT DETAIL

T9.4 PUSH-IN TERMINALS
PATENTED

KIT 21X TYPICAL
ASSEMBLY WITH
ADDED COMPONENTS
CHASSIS 17"x4.9"x2"

T 30N-2 PATENTED

SAVE SET-UP TIME ON EXPERIMENTAL CIRCUITRY

The Vector EXPERIMENTER'S CHASSIS provides quick set up of electronic circuitry with simple hand tools. Intended mainly for mock-ups, the structure is also suitable for more permanent use and may be mounted on racks or in cabinets with added adapter plates. The construction is highly flexible and parts can be readily cut to make other sizes than those supplied. Kit-20X provides a low cost " sampler " with wiring decks 4-3/4"x8-1/2"x3/32" and a small assortment of accessories. Kit-21X supplies a larger deck 4-3/4"x17"x3/32" plus a large number and variety of accessories for more varied assemblies. The main wiring deck consists of a sheet of phenolic 3/32" thick having a uniform punched pattern of holes .093" in diameter and spaced 0.265" on centers. If other hole-pattern boards are preferred, such as "G" pattern with 1/16" holes on alternate 0.1" centers, these may be obtained as accessories and will slide into the chassis grooves.

Unique extruded aluminum side rails with grooves for holding circuit boards or covers are provided for the chassis. Rails quickly slide together at the corners as described in "Expandable Case" catalog pages, 1-8, Sec. V. Rails are 2" wide with 0.1" grooves. Vectorboards mount in any grooves or on top. Covers are extra.

See further details next page.

KIT 20X WITH FURNISHED ACCESSORIES
CHASSIS 8-1/2"x4.9"x2"

CONTENTS OF 20X KIT: Chassis & Vectorbord described plus 20 Springclip & 75 T9.4 Terminals; 3 Min. 7 Pin, 2 Octal & 3 Noval 9 Pin Tube Skts; 2 Pot Brackets, Plastic Parts Box with 30 asstd. screws, nuts, 12 spacers, 2 bus strips; Installing. Tool.

CONTENTS OF 21X KIT: Larger Chassis as described plus 50 Springclip & 100 T9.4 Terminals; Same Sockets as above plus 6 Transistor Sockets; 4 Pot Brackets; 14 Misc. Brkts; 2 Spools Bare & Insulated Hook-up Wire; 3 Bus Strips; Plastic Parts Box with 46 asstd. Screws, 28 nuts; 22 Spacers; 2 Installing Tools, layout paper. See more complete list on page 5.

KITS 22X & 22XA FOR TRANSISTOR CIRCUITRY

KIT 22X has a 4.8"x8.5" Vectorbord ("A" Pattern) mounted on 2" aluminum rails of "Expandable Case" type.

KIT 22XA similar but with 8.5"x17" Vectorbord 6 universal type transistor Skts. With saddles fit pins "in-line" or "JEDEC". Mount on spacers above board. Also 2 power transistor sockets.

CONTENTS OF KIT 22X: Chassis, Vectorbord & sockets as above plus 75-T9.4 Push-in & 20-T30N-2 Springclip Terminals; 3 Bus strips 8" long; 6 Patch Cords, Installing Tool for T9.4; 2 Spools Bare and Insulated Hook-Up wire; Layout Paper; 4 Pot Brackets and Adapter Washers; 8 asst'd. brackets; 2 Plastic Parts Boxes with 38 asst'd. Screws; 34 Nuts; 16 Spacers; 4 Thumb Pins.

CONTENTS OF KIT 22XA: Larger chassis, Vectorbord and Sockets described above plus 100-T9.4 and 100 T30N-2 Springclip and 18 T32A-U-Clip Terminals; 4-T9.62 and 6-T31A Terminals; 3 Bus Strip 16" long; 14 Patch Cords, 9" and 15" long, 2 Installing Tools for T9.4 and T30N-2; 2 Spools, Bare and Insulated Hook-Up Wire; Layout Paper; 4 Pot Brackets; 8 asst'd. brkts; 2 Plastic Parts Boxes with: 54 asst'd. Screws; 42 Nuts; 20 Spacers; 10 Thumb Pins; "Numletr" Transfer sheet (no's. and letters).

PUSH-IN TERMINALS of both solderless and solderable type are supplied. The T-30N-2 SPRINGCLIP (see Fig.) holds up to six component wires tightly without soldering. The wires need only be pushed into a slot at the end of or thru the coils of a spring with low contact resistance. Leads are not damaged. Parts may be used over and over again. A simple tool is provided to push the terminal in the hole. No staking is required tho this may be done if desired.

Terminals have side wings to facilitate pushing down with fingers or by the P92A tool.

T9.4 PUSH-IN TERMINAL GRIPS AND SOLDERS TO WIRES

The T9.4 Push-in Terminal has partially tubular end which springs snugly into board holes. The top of the terminal has a tapered slot with serrated edges. When a wire of between .030" and .045" is pushed in, the edges will be forced apart to grip the wire. The slot is offset from the axis so that wire coming up thru the hole will not interfere with a cross-wire. Leads are usually soldered.

Tandem terminals provide strips across two or more of the above for multiples.

TUBE OR TRANSISTOR SOCKETS MOUNT ABOVE-BOARD

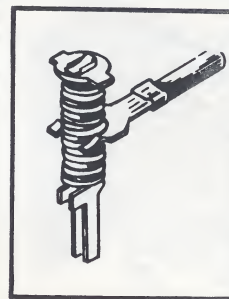
Tube sockets are of the solder lug type. Solderless types may be ordered separately (see following pages). Transistor sockets have mounting saddles, screws and spacers. Tube sockets are mounted as follows: #2/56 round head screws are placed in the center hole of the 7 or 9 pin miniature sockets and screwed into desired hole in the board. Or conventional saddle type sockets may be mounted by placing the longer spacers under the saddle holes and screwing down, using 3/4" long screws. Octal sockets are screwed down with No. 4 screws thru the saddle holes with the longer spacers underneath. Vector saddle-mounted transistor sockets are screwed on in the same manner as the octals. Various brackets are supplied to mount pots, switches, terminal strips, etc. Bus strips which match holes of board facilitate strapping adjacent terminals or ground lines. Patch cords provide quick connection between Springclips as in figure. Thumb pins mount parts easily in holes.

A more detailed list is given on Page 5 entitled "Parts Price List for Experimenter's Kits".

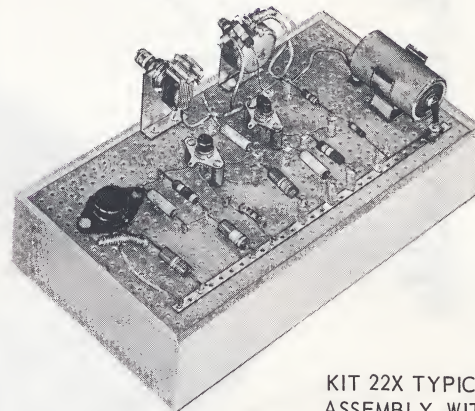
VECTOR ELECTRONIC CO., INC.

1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

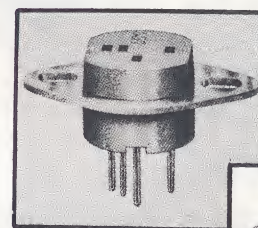
TWX 213-240-2162



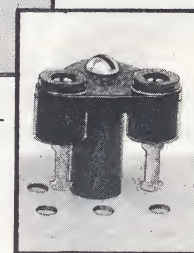
T30N-2 SPRINGCLIP AND
CONNECTED PATCHCORD



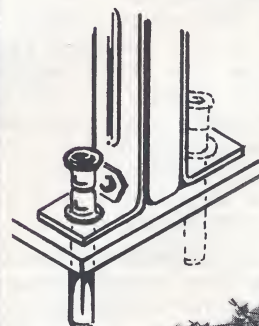
KIT 22X TYPICAL
ASSEMBLY WITH
ADDED COMPONENTS
KIT 22XA IS SIMILAR
BUT SIZE OF 25X



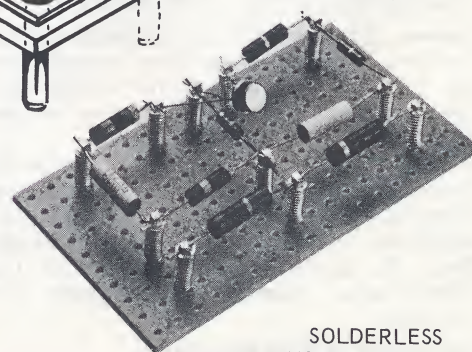
RA4.5
TRANSISTOR SOCKET



POWER TRANSISTOR
SOCKET



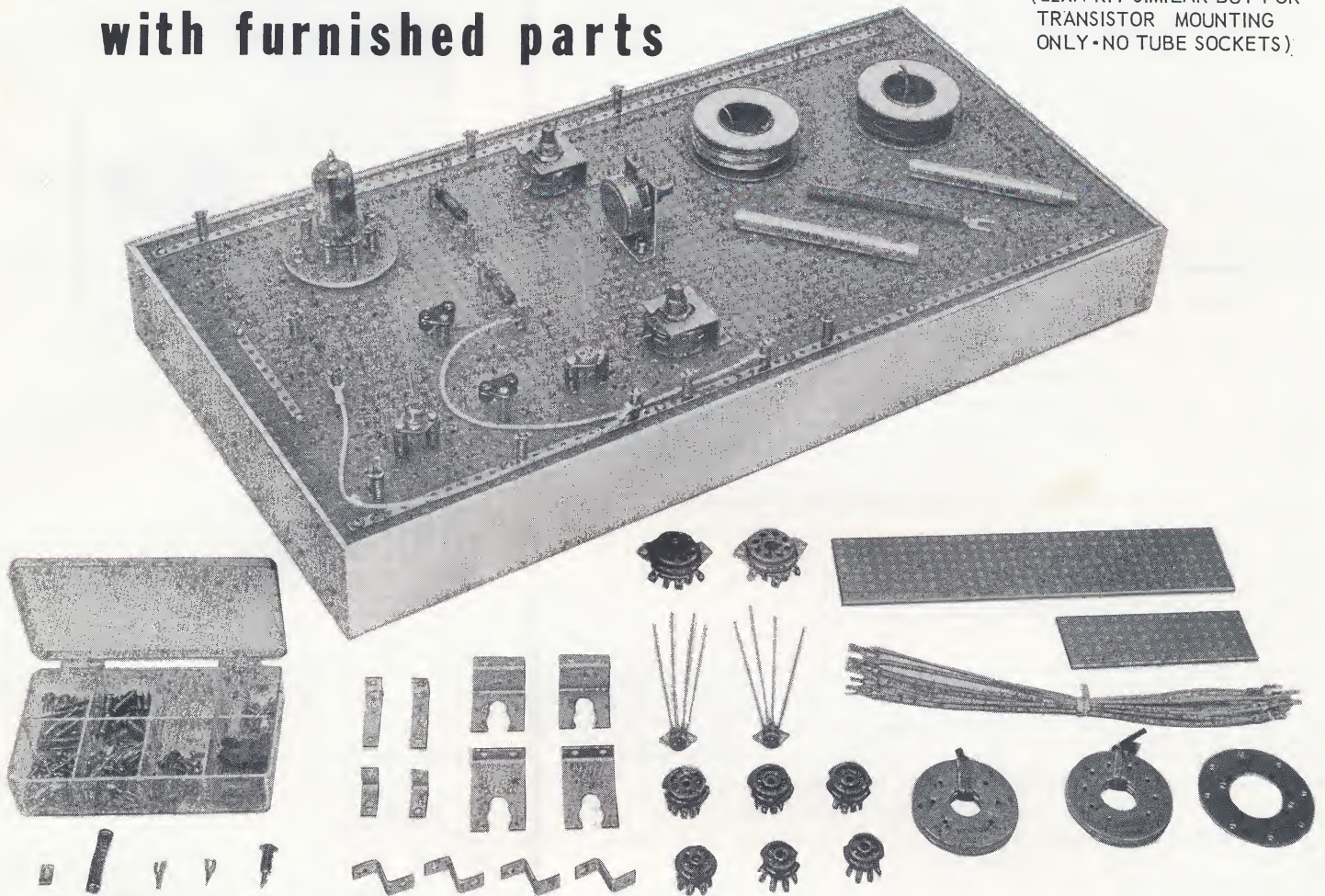
THUMB PIN K7
THUMB PIN HOLDS
DOWN TRIMPOT



SOLDERLESS
MOUNTED CIRCUIT

25X SOLDERLESS KIT with furnished parts

(22XA KIT SIMILAR BUT FOR
TRANSISTOR MOUNTING
ONLY-NO TUBE SOCKETS)



SAVE CIRCUIT DESIGN TIME

The Vector Solderless Circuit Set-up System is a new and convenient method to set-up and test circuits rapidly without having to solder and unsolder connections.

UNIQUE SOLDERLESS TERMINALS

Quick set up is achieved by use of Vector Springclip terminals, T30N-2 and T32A (see Page 1 of Section VII). SPRINGCLIPS hold as many as six component leads without soldering or crimping wires. This allows reuse and prevents heat damage to expensive components. Contact resistance is less than .01 ohms. A few of the new T32A Side Entry U-Clip OPEN SLOT type Solderless SPRINGCLIP terminals are also included in the kit. These permit direct lay-in of wires into the terminal slot without threading thus simplifying hookup.

A variation of the SPRINGCLIP, the T31A LUG-CLIP is supplied which can be slipped onto the lugs of pots and switches to attach wires.

NEW ALUMINUM EXPANDABLE CHASSIS

The Vectorbord 8-1/2" x 17" x 3/32" punched deck with .093" diameter holes on 0.265" centers is supported on the new FRAME-LOC EXPANDABLE ALUMINUM CHASSIS.

2" wide SIDE RAILS plug into each other at corners to provide a handsome, screwless, exterior. Grooves on the interior surfaces support VECTORBORDS or other panels either at top, bottom or inbetween --no need to screw them on. (See more complete description of chassis in Section V, Bulletin 86). Aluminum covers, rubber feet, additional rails, and connectors for expansion of the chassis are separately available as accessories. The user may slide the VECTORBORD in the top groove to work on it. Later, he can quickly shift it to an inside position and slip metal covers on to obtain a handsomely enclosed case adequate for most finished applications.

TRANSISTOR AND TUBE SOCKETS

Universal type Transistor sockets (4 supplied) have pig-tail leads which connect easily to SPRINGCLIPS. These mount quickly above the board on spacers secured through saddle by screws.

VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area -213 Phone 245-8971

TWX 213-240-2162

TRANSISTOR AND TUBE SOCKETS (Cont'd. from prev. page)

Two Power Transistor Sockets are also supplied. Three Miniature 7-pin, 3 Noval 9-pin and 2 Octal sockets are also supplied with the 25X Kit. With these, mounting wafers are also furnished which enables the user to assemble solderless type sockets similar to those illustrated and described on page 5 of Section X.

The Kit provides similar parts to those supplied with kit 21X described on another page (please refer to this) but is larger and provides more solderless terminals and also solderless socket parts which are not furnished with the other kits. See Parts List, page 5, Section IX for detailed list of contents.

NOTE Kit No. 22XA described on a previous page provides same chassis size as above and many of the same parts but has no tube sockets. See List page 5.

OTHER BREAD-BOARD ITEMS: WOOD CHASSIS FRAMES

Vector wood frames provide inexpensive supports for various size Vectorbords. These are available completely assembled with Vectorbord Decks or the individual parts may be purchased. Besides their low cost, wood frames make possible less expensive breadboarding where the aluminum side rail method might be too costly. Knocked down kits contain wood frame members and fasteners, easily assembled by user.

Knocked down kits contain wood frame members and fasteners, easily assembled by user.

Catalog Number	Deck Size	Deck Material	Hole Dia.	Hole Pattern	"A"	"B"
X32AA18	4-13/16"x8-1/2"x3/32"	XXXP Phen.	.093"	.265" ctrs.	5-3/16"	8-29/32"
X64AA18	4-13/16"x17"x3/32"		.093"	.265" ctrs.	5-3/16"	17-3/8"
X64AA32	8-1/2"x17"x3/32"		.093"	.265" ctrs.	8-29/32"	17-3/8"
X85G24EP	4-13/16"x17"x1/16"	Epoxy Paper	.062"	Alt. .1" ctrs	5-3/16"	17-3/8"
X85G42EP	8-1/2"x17"x1/16"		.062"	Alt. .1" ctrs	8-29/32"	17-3/8"
X32AA18-1	4-13/16"x8-1/2"	Not Furnished Wood Frames Only			5-3/16"	8-29/32"
X64AA18-1	4-13/16"x17"				5-3/16"	17-3/8"
X64AA32-1	8-1/2"x17"				8-29/32"	17-3/8"

Section II, Page 1-4 for Vectorbords for knock-down frame.

BUS STRIP

Punched tinned copper strip which mounts to Vectorbord deck with Zip Push-In terminals or self tap screws. Furnished 0.20" wide & .093" holes on .265" ctrs. for "A" pattern or 0.125" wide & .062" holes on 0.2" ctrs. for "F", "G" & "H" patterns.

Cat. No.	Description	Pkg. Qty.
T57	Punched Metal strip 0.20" wide x 16" Lg. Holes P.C. .265"	(X) 10, (C) 100
T58	Punched Metal strip 0.20" wide x 8" Lg. Holes P.C. .265"	(X) 10, (C) 100
T104	Punched Metal strip .125" wide x 17" Lg. Holes P.C. .200"	(X) 10, (C) 100

MOUNTING PEGS FOR BREAD-BOARDS

Drive Pins - Economical legs. Lowest cost Vectorbord support. Roll Pins with plastic feet which slip on after installation to prevent scratches on bench.

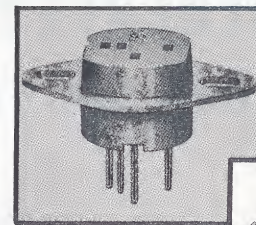
Part No.	Description
1110-49S	Pins-Roll type-slotted steel .063" dia. x .750" Lg. chamfered ends and Plastic sleeve.
1111-51S	Pins-Roll type-slotted steel .094" dia. x .750" Lg. chamfered ends and Plastic sleeve.

PAD CUTTER TOOLS

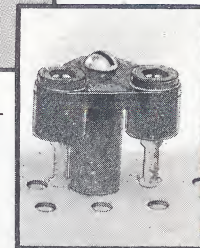
Copper Pad Cutter Tools - Extremely useful for "ground plane" type circuitry using copper clad Vectorbord. Tools cut ring of copper away from hole making possible use of T28 Miniclips or standard turned terminals as isolated terminals. Special design leave anchor pad of copper in center of ring to solder terminals to board if desired. Use in any 1/4" chuck. See also Sect. IX, Pg. 12.

P-116 Cuts 1/4" diam. isolation ring
P-116A Cuts 3/16" diam. isolation ring

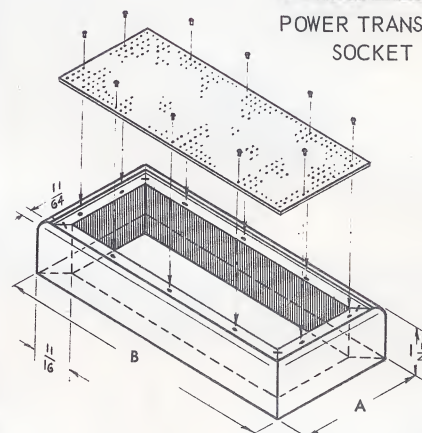
Terminal Insertion Tool P-122 - Holds T9.4 or T9.6 for easy insertion in Vectorbord.



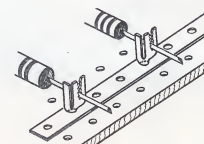
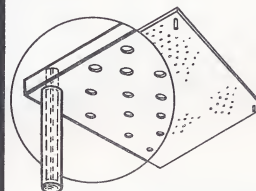
RA4.5
TRANSISTOR SOCKET



POWER TRANSISTOR
SOCKET

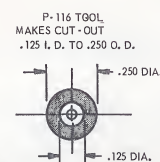


WOOD FRAMES



BUS STRIP

MOUNTING PEGS FOR BREAD-BOARDS

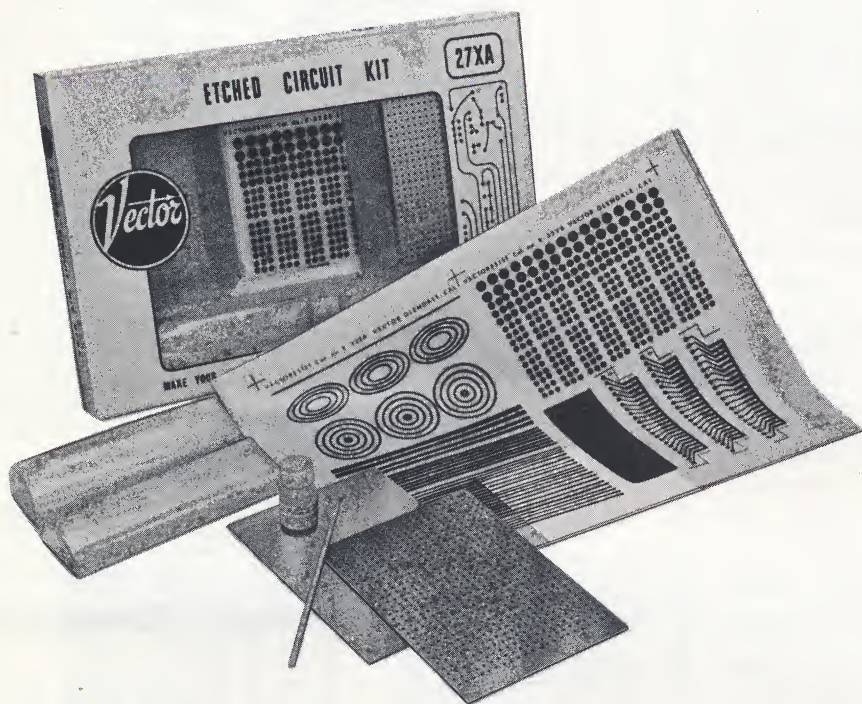


COPPER PAD CUTTER
P 116 AND P 116A TOOL

P-122
INSERTION
TOOL



PART NO.	PART NAME -- DESCRIPTION	QUANTITY IN KITS					PRICES	
		20X	21X	22X	22XA	25X	Base	Qty.
32AA18	Punched Phenol. Brd. 4-13/16"x8-1/2"x3/32"	1		1			.84	1-19
64AA18	Punched Phenol. Brd. 4-13/16"x17"x3/32"		1				1.60	1-19
64AA32	Punched Phenol. Brd. 8-1/2"x17"x3/32"				1	1	2.45	1-19
SR2-8.5/093	Random size pieces "A" Pattern Vectorbord Alum. Chassis Side Rails 8-1/2"x2"	1 Pr	2	2	2	2	.99	1-19
SR2-4.8/093	Alum. Chassis Side Rails 4.8"x2"	1 Pr	1 Pr	1 Pr			.79	1-49
SR2-17/093	Alum. Chassis Side Rails 17"x2"		1 Pr		1 Pr	1 Pr	1.43	1-49
BR50	Corner Brackets For Side Rails	18	18	18	18	18	.75	Pkg 50
SC4-2	Screws For Rails, #4x1/4" Stl. Truss Self-Tap	8	8	8	8	8	.45	Pkg 50
RA-2	Power Transistor Socket		2	2	2	2	.09	1-499
RA4.5	Universal Transistor Skt. with Saddle		4	6			.25	1-499
RA4.51	Universal Transistor Skt. with Saddle+pig-tails				6	4	.39	1-49
R72	7P. Min. Socket No Saddle	3	3			3	.09	1-499
R92	9P. Noval Socket No Saddle	3	3			3	.14	1-499
R8	8P. Octal Socket with Saddle	2	2			2	.11	1-499
T9.6	Push-In Term. Diode Clip				20		2.10	Pkg 100
T9.62	Tandem of 2 Push-In Term.				4	4	1.22	Pkg 25
T9.4	Push-In Term. (Solder Type)	75	100	75	100	100	1.25	Pkg 100
T30N-2	Push-In Term. (Solderless Springclip)	20	50	20	100	90	6.95	Pkg 100
T32A	Side Entry (Solderless Springclip)				18	10	9.45	Pkg 100
T64	Spring for Leg of T30N-2 Term.		18	12	18	18	.40	Pkg 50
T31A	Solderless Lug-Clip				6	6	9.45	Pkg 100
K6.09	Patch Cords for T30N-2 & T32A, 9" length		8	6	10	10	3.00	Pkg 25
K6.15	Patch Cords for T30N-2 & T32A, 15" length				4		3.00	Pkg 25
T57	Punched Metal Strip (Bus) 0.20"x16"		3		3	3	1.10	Pkg 10
T58	Punched Metal Strip (Bus) 0.20"x8"	2		3			.70	Pkg 10
0865-1507/.313	Phenolic Spacers 1/4" O. D. x.313" Lg.	6				6	.04	10-499
0865-1513/.500	Phenolic Spacers 1/4" O. D. x.500 Lg.	6	6			6	.04	10-499
0865-1114/.406	Phenolic Spacers 3/16" O. D. x13/32" Lg.		16	16	20	16	.04	10-499
0111-221-07/.750	Screws, R.H., St., 2/56x3/4"	6	18	15	20		.90	Pkg 50
0111-221-01/.250	Screws, R.H., St., 2/56x1/4"	6			10	10	.60	Pkg 50
0111-211-14/.875	Screws, Flat Hd., 2/56x7/8"					24	.90	Pkg 50
0111-424-09/.313	Screws, R.H., St., #4x5/16" Self-Tap	12	16	15	16	16	.60	Pkg 50
0111-424-30/.750	Screws, R.H., St., #4x3/4" Self-Tap	6	12			12	.60	Pkg 50
NT-4-1	Nuts Sheet Metal, Steel #4					12	.35	Pkg 25
0251-210-01	Nuts, St., 2/56 Thrd.	12	18	24	32	36	.94	Pkg 100
HD2.1	Retainer Clip (Term.)		10	10	10	10	.50	Pkg 50
520	Wafer for 7 Pin Solderless Socket					3	.17	1-49
515	Wafer for 8 Pin Solderless Socket					2	.20	1-49
516	Wafer for 9 Pin Solderless Socket					3	.18	1-49
P92A	Installing Tool for T30N-2 Term.	1	1	1	1	1	.50	1-49
P122	Installing Tool for T9.4 Term.		1		1	1	1.00	any qty.
2323A-20/5	Wire, Bare Tinned #20-Spool 50'		1	1	1	1	.97	any qty.
2323A-20/6	Wire, Insulated #20-Spool 20'		1	1	1	1	.75	any qty.
K7	Thumb Pins For Mounting Parts		4	4	10	10	2.29	Pkg 25
0079-02/5	Plastic Small Parts Box	1	1	1	2	2	2.50	Pad 50
R173A-1	Layout Paper-Pattern "A" 8-1/2"x17"		3 Pc		3 Pc	3 Pc	2.20	Pad 50
R173A	Layout Paper-Pattern "A" 8-1/2"x11"	3 Pc		3 Pc				
B20	Pot. and Sw. Brackets "L" Type		2	2	2	2	.46	Pkg 4
B20A	Pot. and Sw. Brackets "Z" Type			2	2	2	.58	Pkg 4
0311-91-19	Washers to Adapt Switch Brkt to 1/4" Shaft		4	4	6	6	.45	Pkg 25
BR2	Brackets "L" 5/16"x21/32"		4	2	2	2	.50	Pkg 10
BR4	Brackets "L" 5/16"x1-17/64"		4	2	2	2	.50	Pkg 10
B25	Brackets "Z" 1/2"x5/8"x7/16"		6	4	4	4	.26	Pkg 10
R393/Portion	"Numletr" Transfer Sheets for Letters & Numbers				Samp	Samp	2.00	Full Sht.
20X	Kit with 4.8"x8.5"x2" Chassis	} List of Complete Experimenter Kits					6.25	1-49
21X	Kit with 4.8"x17"x2" Chassis						15.25	1-49
22X	Transistor Kit with 4.8"x8.5"x2" Chassis						10.50	1-49
22XA	Transistor Kit with 8.5"x17"x2" Chassis							
25X	Solderless Kit with 8.5"x17"x2" Chassis						19.50	1-49



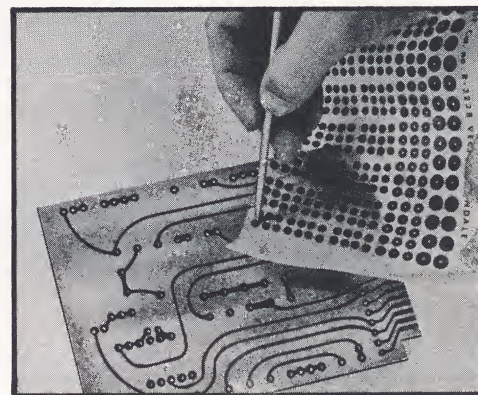
PRICE \$5.95

ETCHED CIRCUITS IN MINUTES

With a Vector 27XA etched circuit kit one can make etched circuits quickly without fancy art work, negatives, or long waiting. Kit contains everything except hot water! To make your circuit, simply sketch it out on the grid layout paper for best component and circuit arrangement, and trace it with carbon paper on copper clad board. Then position transfer Vector resist sheet over lines and "rub on" the resist where required. See reverse side of this sheet for detailed description. After cleaning, the board is placed in the plastic bag, hot tap water is added and in 45 minutes the circuit is etched. Washing and removal of the resist completes the job.

Also Available: Etched Circuit Kit 27X the predecessor of the 27XA is similar to the No. 27XA but contains plastic strips and circles and resist ink instead of the more convenient "Vectoresist".

- ▶ NO MORE WAITING - - - - - LOW COST
- ▶ MAKE ETCHED CIRCUITS AT YOUR DESK
- ▶ USE WHEREVER UNCOMPLICATED PRELIMINARY CIRCUITS ARE REQUIRED.



ABOVE: EASY APPLICATION OF VECTORESIST

CONTENTS OF KIT

Items	Cat. No.	Qty.	Description
Board	3070-1XXXP	1	XXXXP Phenolic Vectorbord clad on 1 side with 2 oz. copper. Pre-punched grid of .062" holes on .2" centers
Board	CU65/45-1	1	XXXXP Phenolic, unpunched 2 oz. copper clad 1 side
Vectoresist	R-322	1	Vectoresist, sheet 10" x 15", lines, circles, connector tabs with 2 polyethylene bags and Ammonium Persulphate plus etch activator
Etchant	2594		
Clips	2595	12	Clips for closing bags
Grid Paper	R-173F	3	Sheets Grid Layout Paper
Stick	0082-33/4	1	"Orange" stick for rubbing resist pattern onto board
		1	Etching Instructions
		1	Vectoresist Instructions
			Misc. scrap Vectorbord

ACCESSORIES

Tape	2592	Card Tape Resist strips for lines
Tape	2593	Card Tape Resist Circles for "Lands"
Resist Ink	3082	1/4 oz. Bottle, with brush
Distributors in all Principal Cities.		

VECTORESIST — "RUB-ON" RESIST FOR ETCHED CIRCUITS

VECTORESIST is a unique, easy to use method of making experimental and limited production etched circuits.

Various VECTORESIST sheets are available including sheets with different width lines, curves, circles, standard and miniature transistor pads, numbers and letters, standard spaced plug contacts. Full sheets are 10"x15".

VECTORESIST eliminates the need for etch resist tapes and pens in laying out resist patterns. VECTORESIST need only be placed coated side down on copper-clad board and figure or line rubbed with a soft pencil or ball point pen. As VECTORESIST sheet is rolled-back, image is transferred to board. After pattern layout is completed, board is ready for etching in either Ferric Chloride or Ammonium Persulphate solution.

PATTERN LAYOUT VECTORESIST SHEET R322

No. of Lines or figures	Figure	Size
5	6" lines	.031" width
17	6" lines	.062" width
7	6" lines	.093" width
4	6" lines	.156" width
253	pads	0.156" dia.
69	pads	0.187" dia.
32	pads	0.281" dia.
1	solid block	1.625" x 5.062"
3	standard spaced plug contact areas which will match standard P.C. receptacles 2 are 22 contact and 1 is 21 contact	0.156" ctr. spacing .093" line width .046" between lines

Misc. curves for joining with straight lines

To Order Vectoresist Specify Catalog No. R-322 Price: \$2.00 per sheet
(See succeeding pages for other patterns).

VECTOR "NUMLETR" TRANSFER SHEET FOR LETTERS & NOS.

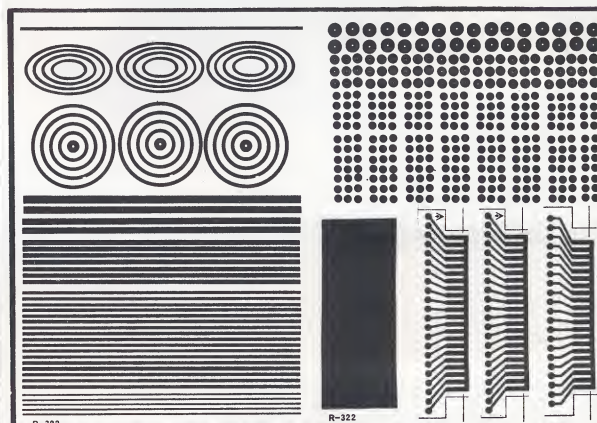
Numletr Transfer Sheets are 10-inch by 15-inch semi-transparent film sheets on which 3/32" high numbers and letters are printed at a spacing of .265", horizontally for numbers and vertically for letters. Letters and numbers may be readily transferred to "A" pattern Vectorbord for hole identification merely by rubbing front side of sheet with ball pen, soft pencil, "orange" stick or other similar device. They may be applied to other grid patterns but in this case the sheet will have to be moved after each character is placed.

Characters and numbers are neat appearing and lend professional appearance to any item on which alpha-numeric marking is desirable. Words may also be formed by selecting the individual characters needed and moving the sheet as required. Numletrs may be applied to any smooth, clean, metal or plastic or paper surface and adhere tightly once applied. Should mistakes occur, letters may be easily scraped off with sharp object such as knife or razor blade and a new character re-applied on same position.

NUMLETR sheets are available with acid resistant letters for use as etch resist or with standard material which adheres somewhat better to a variety of panel materials for display use.

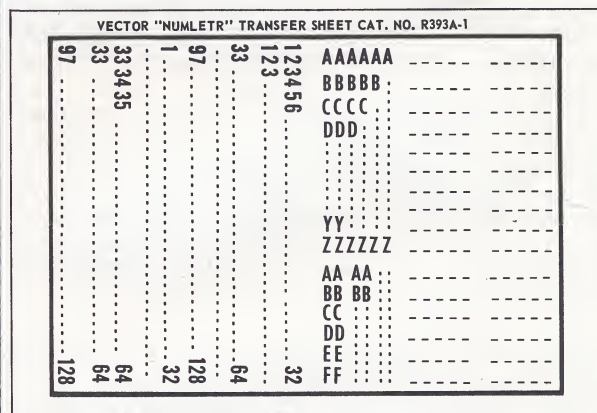
Cat. No.	Type	Price/Sheet
R393-A-1	Display Use	\$2.00
R393	Etch Use	\$2.00

To order Numletr sheets, specify R393-A-1. Price is \$2.00 per sheet.



VECTORESIST SHEET R322

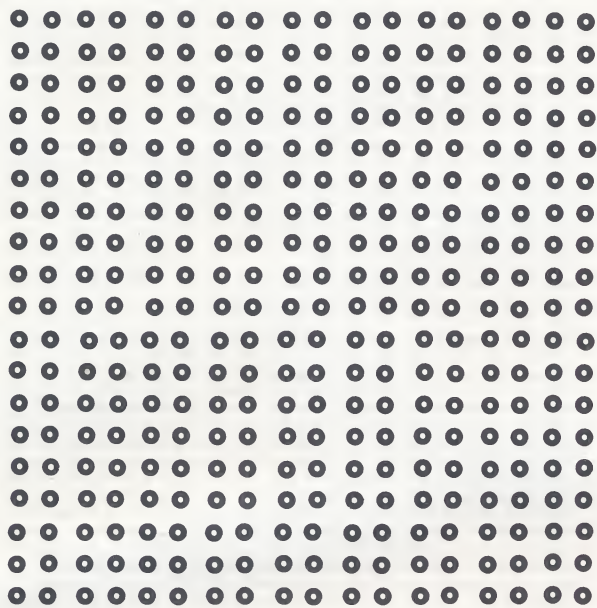
(Actual size 10"x15"-reduced above for pictorial representation)



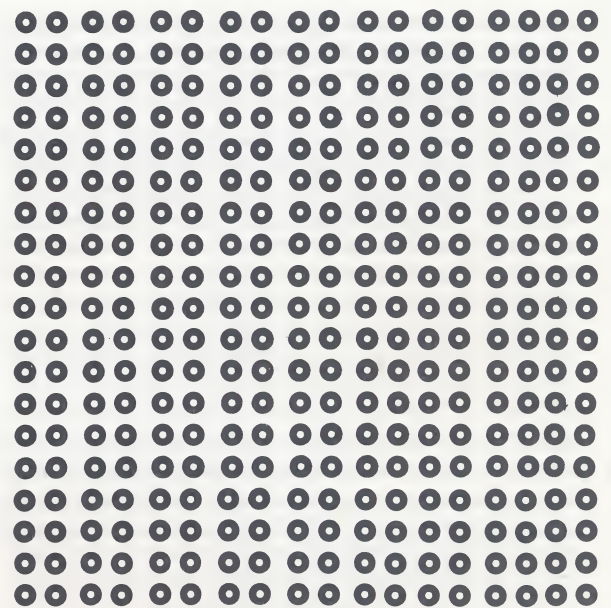
VECTOR "NUMLETR" SHEET R393A-1

(Actual size 10"x15")

VECTORESIST Cat. no. R-406-1

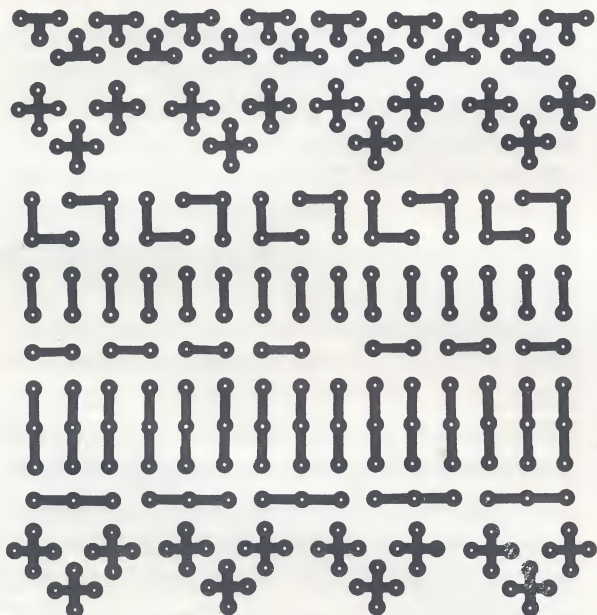


VECTORESIST Cat. no. R-406-2

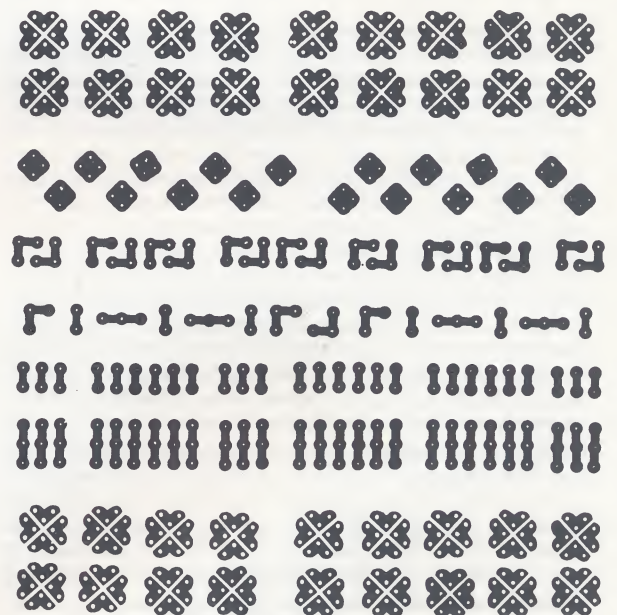


PATTERNS SHOWN ARE ACTUAL SIZE AND APPROXIMATELY HALF OF TOTAL AREA.

VECTORESIST Cat. no. R-406-3



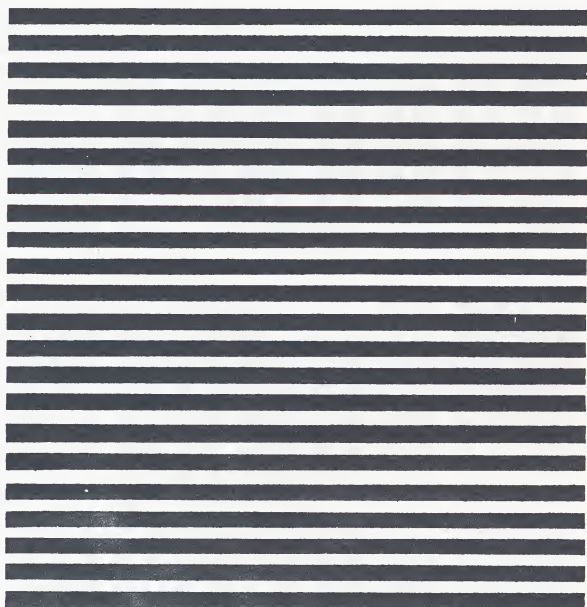
VECTORESIST Cat. no. R-406-4



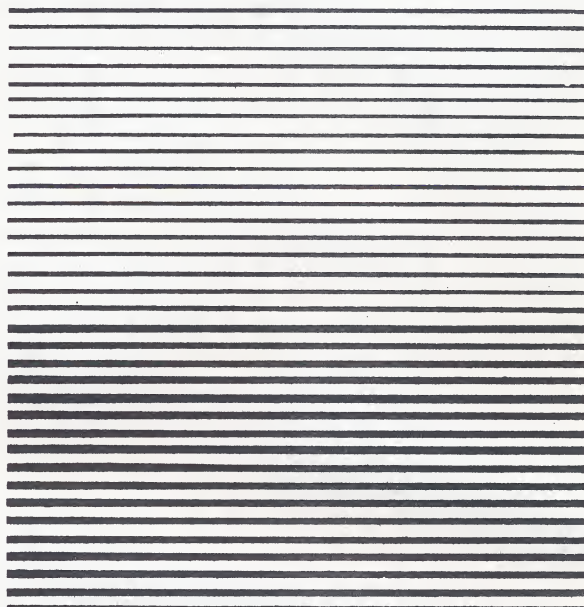
ORDERING INFORMATION

Description	Sheet Size	Cat. No.
Vectoresist Rub-On Resist Sheet	10" x 15"	R406
Quadrant 1	5" x 7½"	R406-1
Quadrant 2	5" x 7½"	R406-2
Quadrant 3	5" x 7½"	R406-3
Quadrant 4	5" x 7½"	R406-4

VECTORESIST Cat. no. R-405-1



VECTORESIST Cat. no. R-405-2



PATTERNS SHOWN ARE ACTUAL SIZE AND APPROXIMATELY HALF OF TOTAL AREA.

VECTORESIST Cat. no. R-405-3

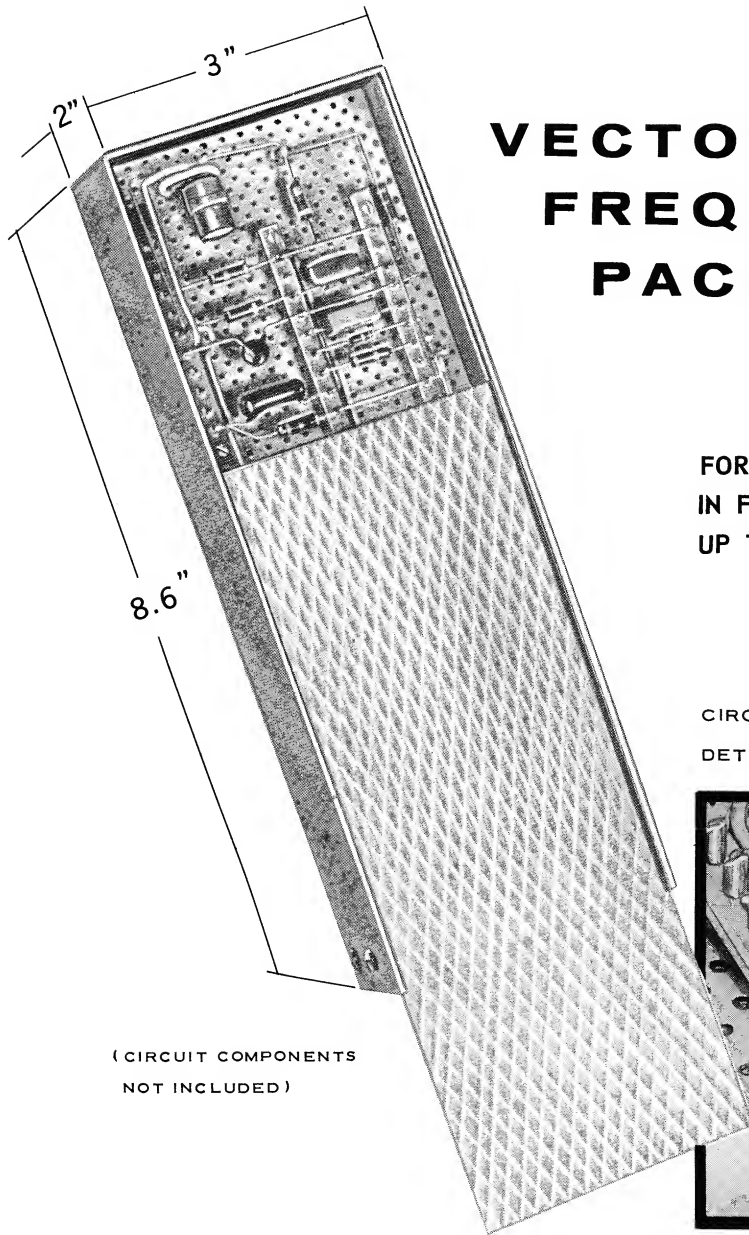


VECTORESIST Cat. no. R-405-4



ORDERING INFORMATION

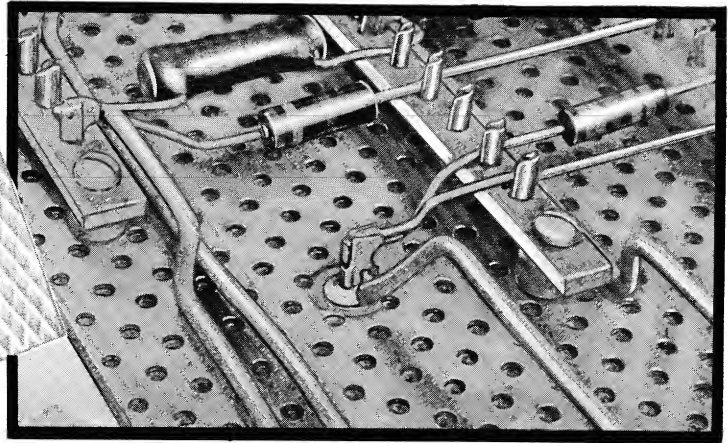
Description	Sheet Size	Line Width	Cat. No.
Vectoresist Rub-On Resist Sheet	10" x 15"	1/64", 1/32", 1/16", 3/32" and 1/8"	R405
Quadrant 1	5" x 7 1/2"	1/16"	R405-1
Quadrant 2	5" x 7 1/2"	1/64", 1/32"	R405-2
Quadrant 3	5" x 7 1/2"	3/32"	R405-3
Quadrant 4	5" x 7 1/2"	1/8"	R405-4



VECTOR-PAK 28X HIGH FREQUENCY CIRCUIT PACKAGING KIT

FOR PACKAGING CIRCUITS OPERATING
IN FREQUENCIES THRU UHF and VHF RANGES
UP TO WHERE "PLUMBING" REQUIRED.

CIRCUIT CONSTRUCTION
DETAIL USING Vector-Pak 28X



A COMPLETE, "RF TIGHT" CIRCUIT PACKAGING KIT

The VECTOR-PAK High Frequency Circuit Breadboarding Kit provides a simple inexpensive method of constructing and packaging circuits operating in the UHF and VHF ranges up to where "Plumbing" is generally used. The circuit performance achieved by the more expensive construction techniques can be virtually duplicated by using the materials provided in the VECTOR-PAK 28X kit. Also with the VECTOR-PAK 28X kit, circuit and component changes can be made very quickly and easily.

The VECTOR-PAK 28X High Frequency Circuit Breadboarding Kit consists of two parts. (1) a unique Case (2) the circuit assembly hardware. The 3" x 8.6" x 2" case provides an RF tight, completely shielded enclosure with 2 slide out shield sides for ready access to the enclosed copper clad circuit board (or boards).

The circuit assembly hardware assortment in the Kit consists of the following: A sheet of Vectorbord (pre-punched terminal board) in 1/16" epoxy glass material covered on 1 side with solder plated 2 oz. copper terminal strips with mounting hardware; transistor mounts, wire, sleeving, T-28 Miniklip terminals; Pad cutter tool to make isolated pads around holes, and other hardware. Circuit boards which require shielding can be quickly made and housed in the attractive and functional low-cost package.

CONSTRUCTION HARDWARE

All circuit components can be mounted close to the copper ground plane by using the terminal strips, transistor sockets and mounting hardware. Narrow tie point strips are fastened as needed to the board holes with #0-80 screws, nuts and spacers. Or strips may be mounted at right angles using "L" brackets and the said screws, nuts. These strips are punched to accept transistor leads. Additional copper clad punched strips are furnished which can be used to compartmentalize the case if so desired. (See Illustration) Where individual terminals are desired on the main board, the Pad cutter tool can be used to remove the copper surrounding holes. The T-28 Miniklips, turned terminals or component wires may be installed. Leads going thru the board can be sleeved or insulated wire can be passed thru the holes. Five longitudinal grooves are provided along the inner surfaces of the aluminum case. Two are for slide-out top and bottom covers and three are for circuit board position. Should the size of some components make it necessary to have more room on one side of the board than on the other, the board is slipped into another mounting groove, after removing the end plate. For other applications printed circuit boards can be used by merely sliding them into place (no special fasteners are needed because of the case end plate construction).

Customers may purchase other size standard Vector cases with slide out sides, or where quantity justifies, special sizes will be made with cutouts, openings, and special circuit board grooves if required. (Continued over)

Construction Hardware (continued)

Two holes are provided in the end piece of the case for cables. Should a plug be preferred it can be mounted in the end piece and the holes eliminated in the process.

Transistors can be mounted by (a) sockets, (b) use of "transmount" pads (See illustration) or (c) by threading the leads thru the T0-5 pattern holes existing in the boards.

T28 " Miniklip " terminals may be quickly pushed into the 1/16" holes of the main board and strips, and need not be staked. (using the pad cutter if needed for insulation).

HOW TO USE THE VECTOR-PAK 28X HIGH FREQUENCY BREADBOARDING KIT

Suggestions offered below will probably be obvious to most users, but reading them will speed circuit construction and may help develop more ideas of your own. The circuit to be breadboarded ideally should first be planned using the hole layout paper furnished. Position of circuit elements such as transistors, resistors, capacitors, etc., should be drawn for optimum lead length and minimum undesirable coupling. Tie point strips are supplied to insulate terminals from the ground plane. Or, if preferred, the copper can be neatly removed around holes using the pad cutter tool P-116 which then provides terminal insulation.

DESCRIPTION OF KIT CONTENTS:

1. Main Circuit Board

The peripheral boundaries of the copper clad, solder plated main board are insulated by a narrow strip of plastic tape so that it can be grounded as desired at one point only. Punched holes in the board are 1/16" diameter to fit furnished T28 MINIKLIP Push-In terminals and eyelets. Standard turned terminals can be staked in if desired. (These are not supplied but can be readily obtained from VECTOR or most distributors) The hole pattern is arranged to fit the common T0-5 size transistor base leads. Should the user prefer to make a printed circuit, copper clad boards can be supplied, with or without holes. See Vector Catalog Sheets Section IV, p. 10 and Section VIII pp. 1-2. Use of the Vector etched circuit kit 27X will allow the experimenter to quickly make his own etched board.

2. Pad Cutter Tool P116 for Terminal isolation

This is used to cut away copper surrounding a hole to isolate it from the ground plane so that isolated terminals can be installed. The inner ring of copper left by the tool serves as a pad to hold the terminal when soldered. The tool is made to fit any drill or hand chuck which will accommodate a 1/4" shank.

NOTE: Drilling too deep, beyond the first layer of insulation, will result in a weakening of the board. For best results drill just deep enough to expose the insulation.

3. Tie Point Terminal Strips

Used as a connecting device for components. Mount as shown in illustration, using #0-80 screws, spacers and nuts as shown. The nuts may be held by a furnished plastic socket wrench while the screw is turned into engagement.

HINT: Mounting two terminal strips parallel to each other will simulate a low leakage component mounting board. (See cover photo)

4. Wall Strips

Furnished with and without copper cladding. Used as a mounting device for components and to shield compartments. Mount as shown in illustration with brackets and screws. Shielded compartments may be formed by mounting copper clad strips between circuit sections and components. Leads may be passed thru the punched holes in the wall strips.

5. Transpads for mounting Transistors

These are epoxy glass pads with 4 holes on 0.2" diameter circle and 1 hole in the mounting arm. They can be used as a sandwich with thru screw #0-80 (see illustration) to hold transistors. Transistor leads bend out to connect to circuitry, or transmounts can be mounted on 1/8" spacer to hold transistor above board. Another alternative is to pass the leads thru the transmount, then sleeve them and pass on thru the board holes, then either connect them below or return the leads and sleeves back thru other holes to the top side.

6. Transistor Sockets and Transistor Mounting

The right angle mounting transistor socket can be fastened to the main board by a single #0-80 screw and nut for top side mounting. Transistor sockets are also furnished without saddle.

These may be mounted as follows:

a. Transistor sockets without saddle

(1) To mount on "wall" strips, insert eyelets in holes corresponding to transistor socket tabs arrangement. Push socket tabs into eyelets as far as they will go and then, with flat end pliers crimp each eyelet barrel flat against socket tabs so that they are held securely.

(2) To mount on main board first ream copper off required holes with pad cutter tool. Make sure pads clear each other. Then proceed as in 1.

b. To mount transistors without sockets:

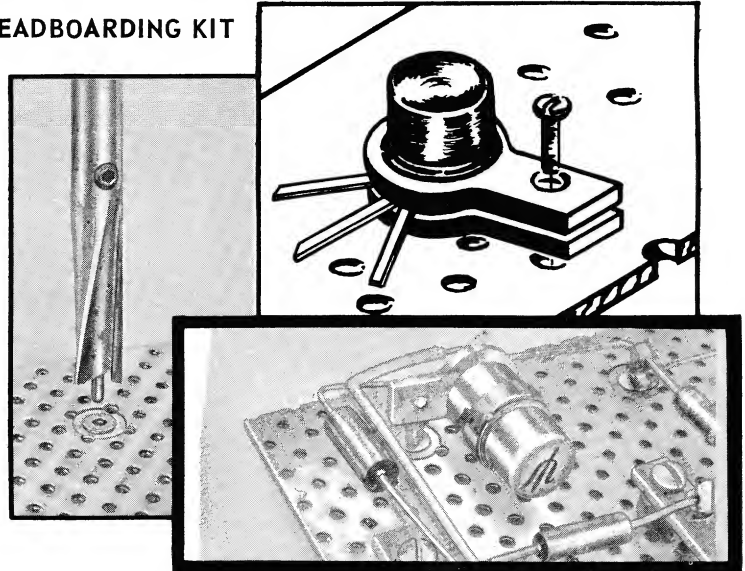
(1) In insulated "wall" strips without copper: Thread transistor leads thru holes and then to terminals involved.

(2) In copper clad boards: To bring leads out on opposite side of board from transistor first thread leads thru holes of a "transmount". Add sleeving around leads and thread thru holes of copper clad board. Make sure sleeving does not pull off to allow contact with copper cladding. (Cont)

MULTIPLE APPLICATIONS - Many special applications appear to the user. A few are listed below.

Any number of encased units can be readily connected together to accommodate extensive complex circuitry.

To join cases together holes are drilled or punched at appropriate positions along the sides. Into these holes available threaded bushings are inserted to join adjacent sides. Installing nuts on the bushings completes the coupling and the holes thru the bushings permit cables to pass from case to case. At the end plate positions the screws are inserted thru both cases instead of one. In this way each portion of the circuit can be separately compartmented, yet be quickly accessible for testing or changing. Still another possibility is to make the various cases plug in to each other (connectors are not provided in Kit but are readily available from Vector or distributors)



CAT. NO.	Qty.	PART LIST
HF20/86/31	1	Case 8.6" L. x 3.08" W. x 2" Deep with 2 slide out sides.
2900	1	Copper-clad pre-punched Vectorbord epoxy-glass 1/16" thick by 3' x 81/8" with 2 oz. solder pltd. copper on one side notched to fit end plate.
2900-1 (not furnished)		Same as above but not plated (for etching)
2900-2	nished	Same as above but with copper on both sides (for etching)
2896	4	Stand Off terminal strips with 8 terminals on approximately 0.2" w. x 1.94" long epoxy-glass, 0.2" spacing of holes.
2897	2	As above but 12 terminals and length 2.85"
2898	3	Punched "Wall Strips, 0.64" w. x 1.94" long, with attached "L" mounting brackets, epoxy-glass, no terminals.
2899	2	As above but 2.85" long.
2903	3	Copper-clad punched strips 0.90" x 2.85" for internal shielding, bracket mounting.
T28	50	MINIKLIP terminals
P-91	1	Inserting Tool for MINIKLIP terminal
P116	1	Pad Cutter tool for removal of copper cladding
RA9,5	3	Right Angle mounting tetraode type transistor sockets.
RA9	3	tetraode type transistor sockets, no saddle
RA2	2	Power Transistor sockets
0111/021-05/.313	36	Mounting Screws #0-80 x 5/16" (Steel cad. plated)
0211-012-01	36	Nuts, #0-80, steel cad. plated.
P117	1	Wrench socket holder for nuts.
0810-0007/.125	15	Qty. 15 - Steel Spacer, 1/8" x 3/16" O.D. x .089" I.D.
2221WE	10	Transmounts, epoxy-glass
2901	1	Roll wire #24 Bright Bare copper, vinyl covered.
2323A-20/5	1	Roll tinned copper wire.
2902	18	.062" O.D. (Max.) plastic tubing to fit over above and also go thru 1/16" hole.
T15.27	50	Eyelets 1/16" x 7/32" (Subject to Revision without notice)

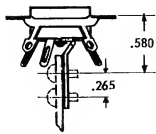
Transistor Sockets and Transistor Mounting (Continued)

(3) In copper-clad boards to keep leads on same side as transistor, first thread leads thru holes of a transmount and bend leads at right angles to transmount. Then place transmount on top of another transmount with leads sandwiched between and pass mounting screw thru both transmounting arms and down thru copper-clad board.

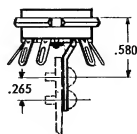
(4) To use eyelets for mounting transistors directly on board: Remove copper around mounting holes corresponding to trans. leads and then insert eyelets in holes. Thread transistor thru transmount and then thread leads down thru eyelets. Then with flat end of pliers crimp body of eyelet against transistor lead.

7. Cover Plate

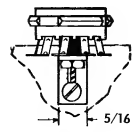
The metal side shields spring snugly against grooves and end pieces. A small dent in cover piece prevents pull out until it is lifted. To remove sides, lift cover at center of end, using finger depression in end plate. Then pull straight out.



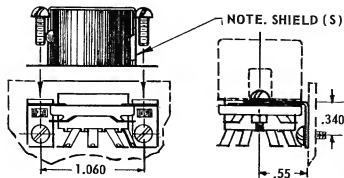
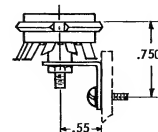
R7B21-J



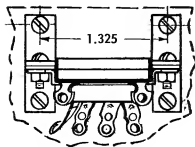
R92B21-J



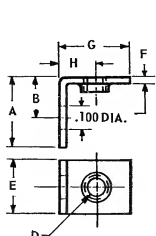
R92BR2-J



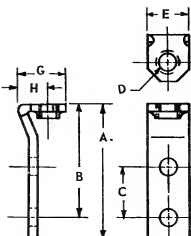
R9BR2J+S



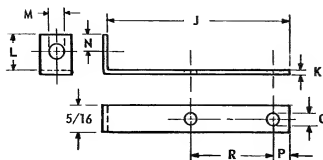
R8BR3-J



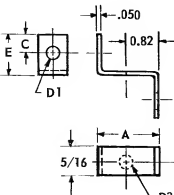
B24A BR10



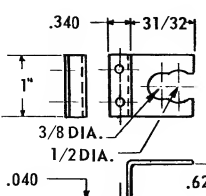
B21, 2, 3, 4



"L" BRACKET

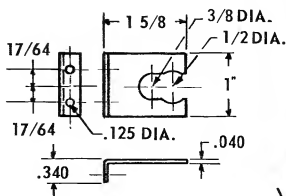


"Z" BRACKET



B20A

AND



B20

EDGE-MOUNT TUBE SOCKETS

Tube sockets mount on edge of card with axis aligned with plane of card. Bracket attached to socket with No 4-40 screw through center hole of socket (except octal which is fastened at saddle). Bracket may be attached to card with two 3/32" diameter eyelets, rivets or No 2/56 screws.

RIGHT ANGLE OFFSET TUBE SOCKETS

These tube sockets mount at right angle anywhere on surface of card. Bracket riveted to center of 7 & 9 pin sockets. Octal socket has bracket riveted to each end of saddle. Shield bases, S7 or S9 per Section XIV Page 4, can be attached, or sockets with crimped on shields can be supplied to special order.

EDGE-MOUNT SOCKETS

RIGHT ANGLE OFFSET SOCKETS

CAT.NO.	SOCKET	SADDLE	CAT.NO.	SOCKET	SADDLE
R7B21J	7 PIN MIN.	YES	R7BR2J	7 PIN MIN.	YES
R72B21J	7 PIN MIN.	NO	R72BR2J	7 PIN MIN.	NO
R9B21J	9 PIN NOV.	YES	R9BR2J	9 PIN NOV.	YES
R92B21J	9 PIN NOV.	NO	R92BR2J	9 PIN NOV.	NO
R8B21J	8 PIN OCT.	YES	R8BR3J	8 PIN OCT.	YES

Material: Sockets have beryll. copper contacts, silverpltd., Tabs H.T.D. Bodies mica-filled phenolic, M.F.E. Saddles steel H.T.D. (see bracket for types used.) Note: Other sockets to special order.

BRACKETS ONLY, FOR EDGE-MOUNT SOCKETS

Material: Half Hard Brass, Cadmium plated.

CAT. NO.	PKG.	A	B	C	D	E	F	G	H
B21	4,100	0.72	0.593	0.265	4/40T	7/32	.040	.25	.15
B22	4,100	0.72	0.593	0.265	1/8	7/32	.040	.25	.15
B23 †	4,100	0.45	0.325	0	4/40T	7/32	.040	.25	.15
B24 †	4,100	0.45	0.325	0	1/8	7/32	.040	.25	.15
B24A †	4,100	0.46	0.345	0	1/8	7/32	.040	.26	0.142
BR10	10,1000	3/8	7/32	0	6/32T	9/32	.031	3/8	3/16

* If "T" shown, bracket is threaded in extruded thickness .080"

† Has burrs on bottom corners to anchor. B24A has bevel corners

Bracket B21 used for all Edge-Mount Sockets

GENERAL PURPOSE "L" BRACKETS

For mounting terminal strips, connectors etc.

Material: Steel, Cadmium plated, except as noted.

CAT. NO.	PKG.	J	K	L	M	N	O	P	R
BR1	10,1000	29/64	.050	29/64	.135	9/64	.113	5/32	0
BR2 †	10,100,1000	21/32	.050	29/64	.113	5/32	.130	5/32	0
BR3 ▲	10,100,1000	61/64	.050	7/16	.140	1/8	.140	3/16	0
BR4	10,100,1000	1-17/64	.050	29/64	.136	5/32	.136	5/32	0
BR5	10,100,1000	1-55/64	.050	11/32	.168	11/64	.136	3/16	7/8
BR5.1	10,100,1000	1-55/64	.036	11/32	.168	11/64	.136	3/16	7/8
BR6	10,1000	2- 7/32	.050	1/2	.130	5/32	.130	1/8	5/16
K-510	14	ASSORTMENT OF 2 EACH OF BR1 TO BR6 INCL.							
MATERIAL: HALF HARD BRASS IN FOLLOWING:									
B1	4	43/64	.040	31/64	1/8 X 3/16	5/32	.100	1/8	.265
† THIS BRACKET USED WITH 7 & 9 PIN RIGHT ANGLE SOCKETS									
▲ THIS BRACKET USED WITH OCTAL PIN RIGHT ANGLE SOCKETS									

"Z" BRACKETS

Used as "feet" for test or terminal boards. Material: Steel, Cad. pltd.

CAT. NO.	PKG.	A	B	C	D1	D2	D3	E	F
B25	10,100,1000	5/8	3/16	3/16	0.130	3/16		1/2	1/2
B26	10,1000	1	5/32	5/32	0.136	.136		1/2	13/32
B27 †	10,1000	1-1/2	3/16	11/64	0.168	.136	.136	13/64	1/2

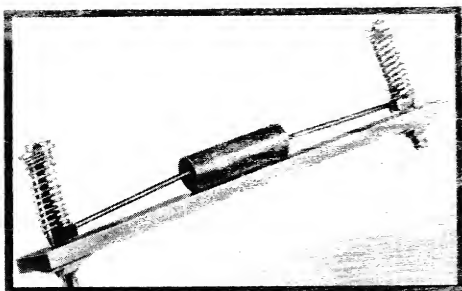
POT AND SWITCH BRACKETS- Holds "pot" or switches on breadboards (1/2" or 3/8" shafts.) Material: Aluminum.

CAT. NO.	STD. PKG.	CAT. NO.	STD. PKG.
B20	4/100/1000	B20A	4/100/1000

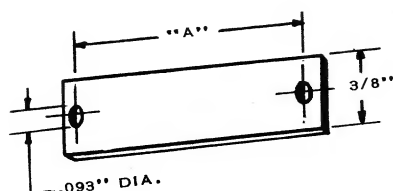
Vector

MODULE MOUNTS FOR
COMPONENTS

SECTION X
PAGE 3
ISSUE 65-1

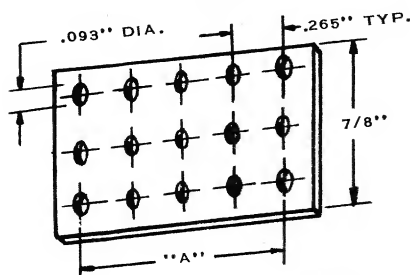


SINGLE PLUG-IN MODULE MOUNT MADE
WITH # 200 BOARD, T30N-2X TERMINALS
AND HD2.1 WASHERS



DETAIL DWG. COMPONENT MOUNTING BOARDS

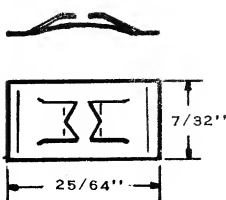
CAT. NO.	"A"
B200	1-1/16"
B201	2-1/8"
B202	1-1/16"



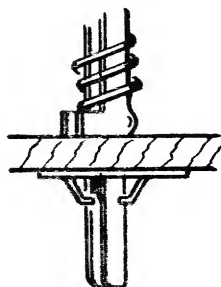
BOARD B202



SPRINGCLIP TERMINAL
T30N-2



RETAINER WASHER HD2.1



VECTOR ELECTRONIC CO., INC.

SINGLE COMPONENT MOUNTS

Single component mounting boards accommodate a single resistor, capacitor, transistors or similar device mounted permanently between SPRINGCLIPS. The mounted component can then be "plugged" into a VECTORBORD "deck" in setting up experimental circuits. Components so mounted are easily inventoried and component lead breakage is eliminated. Since the user furnishes his own resistor, capacitor or transistor, and assembles the mounts, costs are extremely low. Also, there need be no "down time" because of lack of a particular component mounted on a plug-in board. Mounts are furnished in kit form and consist of three sizes of phenolic board for small and large components, solderless SPRINGCLIP terminals, and retainer washer for the bottom end of the SPRINGCLIPS.

SPRINGCLIPS

Modules are made by inserting assembled SPRINGCLIP terminals in holes at end of the strips and installing retainer washers on bottom of SPRINGCLIP posts. Components are then slipped into place beneath the spring and may be soldered if desired. Completed component mounts plug into VECTORBORD, the bottom tips of the SPRINGCLIPS engaging holes snugly.

ORDERING INFORMATION

Component Mounting Kits: Consist of listed quantities of module boards, solderless T30N-2 SPRINGCLIP terminals, retainer washers. Board B200 dimensions 1-3/8"x3/8"x1/16"; B201, 2-1/2"x3/8"x1/16"; B202, 1-3/8"x7/8"x1/16". (Parts may be ordered separately).

KITS	QUANTITY IN KITS				
	Board Number			T30N-2 SPRINGCLIPS	Retainer Washers HD2.1
Catalog Number	B 200	B 201	B 202		
K 601	10			20	20
K601-C	100			200	200
K 602		10		20	20
K602-C		100		200	200
K 603			10	30	30

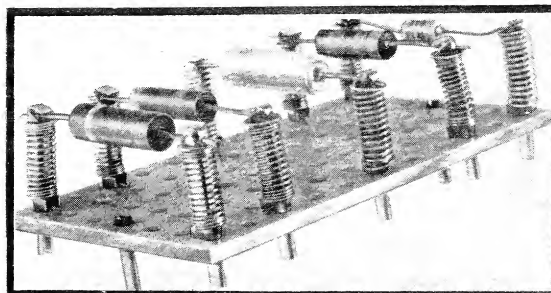
1100 Flower St. Glendale, Calif. 91201 Area-213 Phone 245-8971
TWX 213-240-2162

MOUNTING HARDWARE

Vector

MULTIPLE COMPONENT MOUNTS (MODULES)

Multiple component mounts for separate circuit stages can be made from larger pieces of VECTORBORD (see Section II, pp. 1-4) as required. One size is illustrated and other sizes are available on order, or user can cut from larger pieces of VECTORBORD. These larger modules, with several components, can be left built up and interconnected with hookup wire or patch cords as required. A typical plug-in module is illustrated. The board was cut from a piece of "A" pattern Epoxy Paper VECTORBORD 3/32" thick. T30N-2 terminals were installed, components soldered in, and holding pins installed. Two types of pins are available.



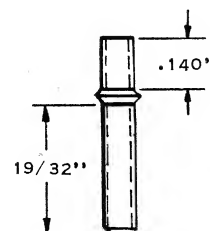
PLUG-IN MODULE MOUNT MADE FROM 3/32"
"A" PATTERN VECTORBORD 11AA7EP, T30N-2X
TERMINALS, GRIP PINS, COMPONENTS.

GRIP PINS

Grip Pins: These are permanently installed with staking tool and holder. Two pins per module are suggested. In operation, the Grip Pins extend below the SPRINGCLIPS mounted on the module board and fit into VECTORBORD deck holes when module is pressed down.

ORDERING INFORMATION

For staking into module boards or brackets to make plug-ins fitting .093" holes in "A" pattern VECTORBORD.



GRIP PIN K8
FOR MODULE MOUNTING BOARDS

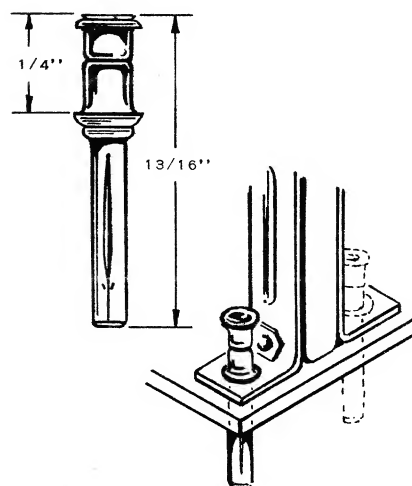
CAT. NO.	DESCRIPTION	PKG. QUANTITY
K8	ROLLED METAL PIN, SPLIT FOR .093" HOLE	100 AND 1000

THUMB PINS

Thumb Pins: These are pressed down with the thumb, generally two to a module, thru end holes in the module board to engage holes in the VECTORBORD deck. To remove, pins are readily pulled out with the thumb and forefinger. Thumb pins can also be used to hold transformer brackets, trimpot brackets, etc.

ORDERING INFORMATION

Thumb Pins: Holding pins for holding down module boards, transformer brackets, etc. Fit snugly into .093" round holes.



THUMB PIN K7
THUMB PIN HOLDS DOWN MODULE
BOARDS, TRANSFORMERS, ETC.

CAT. NO.	DESCRIPTION	PKG. QUANTITY
K7	THUMB PIN	25, 100 AND 1000

SOLDERLESS SOCKET

VECTOR Solderless Sockets for tubes and transistors are used in experimental circuit setups where quick, reliable solderless connections are desirable. Sockets are furnished with mounting hardware for quick attachment to VECTORBORD chassis.

Soldered connections are provided between socket leads and solderless SPRINGCLIP terminals. To make connections to any socket contact, wire is simply inserted in correspondingly identified solderless SPRINGCLIP terminal. Alternately, Patching Leads, Type K6.06 as illustrated with 570B solderless transistor socket may be used. (See following page for details).

MOUNTING DETAIL

Solderless sockets 568-1C and 569-1C are each furnished with a long 2-56 screw and two nuts plus a thumb pin (Thumb Pins shown pg. 4, Section X). The screw is inserted down thru the upper side of socket and nuts are attached on the bottom side of the wafer. The installed screw serves as a "pilot" into the VECTORBORD deck hole. When located where required, Thumb Pin is pressed down thru socket wafer hole and engages VECTORBORD hole in friction fit. Retainer washer, also furnished, can be slipped onto Thumb Pin at bottom side of wafer if user wants to permanently retain Thumb Pin in solderless socket.

Solderless Socket 567-1C is furnished with two Thumb Pins and retainer washers.

Transistor solderless socket 570B has projecting SPRINGCLIP legs on the underside appropriately spaced to engage VECTORBORD deck holes ("A" pattern, .093" holes on .265" spacing).

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PKG. QTY.
567-1C	8-PIN OCTAL SOLDERLESS SOCKET WITH MOUNTING HARDWARE DIM. "A" 1.94"	1 AND 5
568-1C	9-PIN NOVAL SOLDERLESS SOCKET WITH MOUNTING HARDWARE DIM. "A" 1.21"	1 AND 5
569-1C	7-PIN MINIATURE SOLDERLESS SOCKET WITH MOUNTING HARDWARE DIM. "A" 1.22"	1 AND 5
570 B	SOLDERLESS TRANSISTOR SOCKET FOR TRANSISTOR WITH 4 LEADS ON 0.2" DIAMETER CIRCLE MOUNTS 1-3/8" X 7/8"	1 AND 5

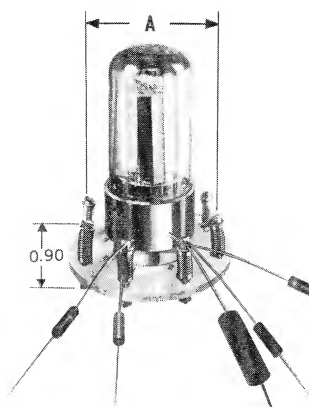
SOLDERLESS TRANSISTOR SOCKETS

RA2.4 is a power transistor socket with two contacts spaced 7/16". RA4.5 and RA4.51 are dual type transistor sockets accomodating 3-in-line leads or 3 leads on 0.2" diameter circle (JEDEC pattern). Pig Tail leads 2-1/2" long are furnished on socket tabs of RA2.4 and RA4.51 which can be connected to adjacent solderless Springclip terminals as required.

Mounting saddles are furnished on RA4.5 and RA4.51. RA2.4 is furnished with a 2-56 screw, nut, and spacer. Sockets are mica filled phenolic with silver plated gold flashed contacts on RA4.5 and RA4.51. RA2.4 has a black bakelite grade CFG casting and Phosphor bronze cadmium plated contacts.

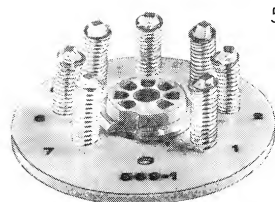
ORDERING INFORMATION

CAT. NO.	LENGTH "A"	HEIGHT "B"	PKG. QTY.
RA2.4	1 1/16"	17/32"	1
RA4.5	3/4"	9/32"	1
RA4.51	3/4"	9/32"	1

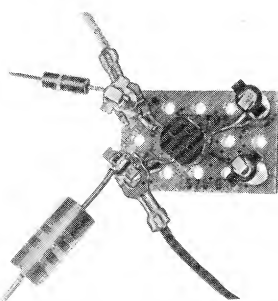


SOLDERLESS TUBE SOCKET

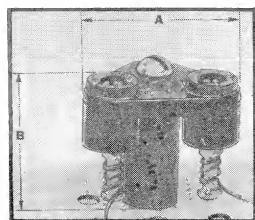
567-1C SOCKET



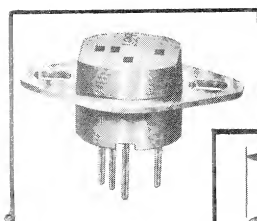
569-1C
SOLDERLESS SOCKET



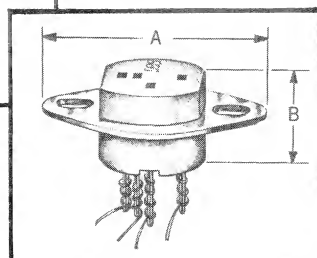
570-B WITH PATCHING TERMINAL K6. SERIES



RA2.4 POWER
TRANSISTOR SOCKET



RA4.5
TRANSISTOR SOCKET



RA4.51 TRANSISTOR SOCKET WITH PIG TAILS

PATCH CORDS FOR INTERCONNECTION BETWEEN SPRINGCLIP TERMINALS

Corrugated spade-type lug on each end of cord slips between coils of SPRINGCLIP terminals and holds tightly. Corrugations assure good retention in SPRINGCLIP. Patch cords are faster to use than hookup wire and are preferable for demonstration use.

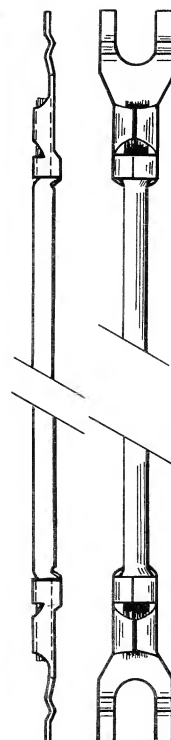
SPECIFICATIONS

Wire: No. 20 gauge stranded with colored insulation

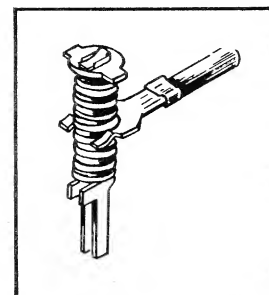
Lug: Plated Brass, corrugated

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PKG. QUANTITY
K 6.06	6" OVERALL, LUG EACH END	25/ BUNDLE
K 6.09	9" OVERALL, LUG EACH END	25/ BUNDLE
K 6.15	15" OVERALL, LUG EACH END	25/ BUNDLE
T 16	LUG ONLY FOR USER ATTACHMENT	100 & 1000/ PKG.



K6-- SERIES PATCHCORD



ABOVE T 30 N-2 SPRINGCLIP
& CONNECTED PATCHCORD

LUG SPRING CLIPS T31N & T31A

Lug Clips and cords are used for Solderless, quick, and reliable connection of test leads to "pot" or switch lugs, capacitor, resistor, or similar lugs not exceeding 3/8" width by .050" thickness. The spring "screws" on to press tightly on the lug and will not snap off as often happens with "alligator" clips. Where all lugs on a pot are parallel, the center lug can be bent at right angles as in the illustration to prevent Lug Clips touching.

T31A provides lug spring-clip only. Wires can be inserted with lug, for simplest use. T31N has 15" wire crimped to tab end of lug spring-clip, thus making it a patch-cord.

SPECIFICATIONS

Lug: Brass with steel spring nickel plated (T31N & T31A)

Wire: No. 22 gauge stranded with vinyl insulated (T31N only)

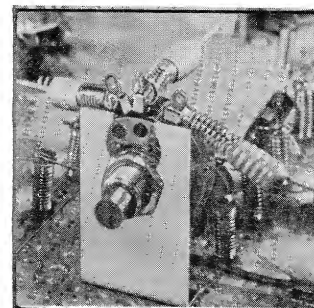
ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PKG. QUANTITY
T31A	LUG SPRINGCLIP	(X) 10, (C) 100, (M) 1000
T31N	AS ABOVE BUT HAS APPX. 15" WIRE ATTACHED	25/ BUNDLE



T31A

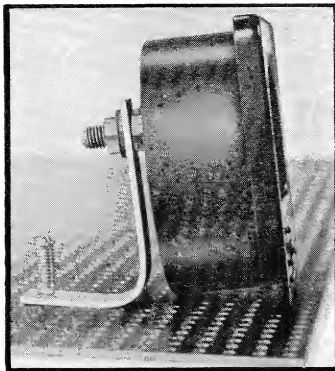
LUG SPRINGCLIP



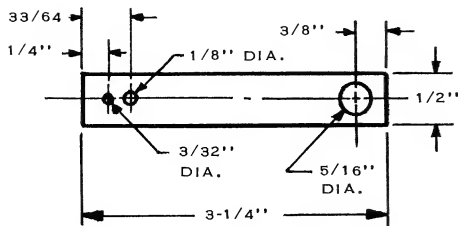
LUG CLIP PATCHCORDS
(WITH ADDED INSULATION)
CONNECTED TO " POT "
MOUNTED IN B20 BRACKET



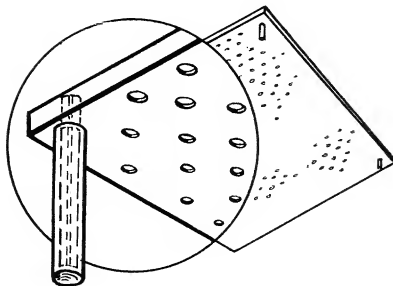
LUG-CLIP PATCHCORD
T31 N



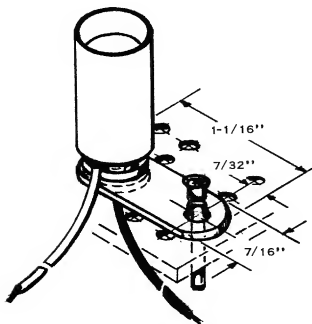
METER MOUNT B40 WITH
SPRINGCLIP (BENT AS
REQUIRED)



METER MOUNT B40



CHASSIS LEG INSTALLED



PLUG-IN LAMP SOCKET RL3
ADDED THUMB PIN PLUGS INTO
ANY "A" PATTERN VECTORBORD

VECTOR METER MOUNTS

VECTOR Meter Mounts make it possible to quickly mount meters right on the experimental chassis. To make quick solderless connections to the meter, leads are connected to the SPRINGCLIP inserted in a hole at the end of the bracket as shown. Meter mounts are soft, easily bent aluminum to accommodate different size meters. Meters may be mounted as shown by bending the mounts, or flat. In either case the SPRINGCLIP terminal pushed into the end hole engages the VECTORBORD deck holes and holds the meter in place. For permanent attachments, a 1/8" screw hole is also provided.

ORDERING INFORMATION

Cat. No.	Description	Std. Pkg.
B-40	Meter Mount, Alum. with punched holes	10, 100

CHASSIS LEGS

Chassis legs are inexpensive supports for VECTORBORD chassis with .062" or .093" diameter holes. Legs press-fit into VECTORBORD holes and plastic shoulder supports board. Chassis legs can be mounted on both bottom and top side of chassis so when board is inverted to work on bottom side, components are not damaged. Chassis legs can be installed and removed quickly without special tools and are reusable over and over. Leg consists of slotted steel tube chamfered on end for easy insertion, mounted in plastic sleeve.

ORDERING INFORMATION

Cat. No.	Chassis Leg Description	Overall Lgth.	Std. Pkg.
1111-51-S	For .093" holes	3/4"	25, 100
1110-49-S	For .062" holes	3/4"	25, 100

PLUG-IN LAMP SOCKET

Plug-in Lamp Sockets accommodate miniature bayonet base lamps. They are furnished with a hole in the bracket for attachment to the board with a Thumb Pin. (Thumb Pins shown in Sect. X, Pg. 4) Two 3" long leads are attached to Lamp Socket. In use, sockets can be merely pressed into VECTORBORD "A" pattern (.093" holes on .265" centers) anywhere, as required and the attached leads connected to adjacent solderless SPRINGCLIP terminals.

Visual demonstrations of series and parallel circuit demonstrations can be quickly setup with these plug-in lamp sockets.

ORDERING INFORMATION

Cat. No.	Description	Std. Pkg. Qty.
RL3	Lamp socket with bayonet base and 2 leads. (Purch. Thumb Pins separately)	10, 50, 100

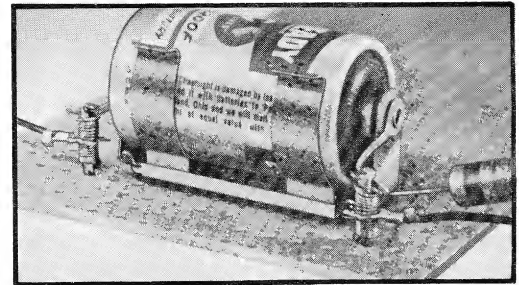
VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif.
91201 Area - 213 Phone 245-8971 TWX 213-240-2162

BATTERY CLIPS

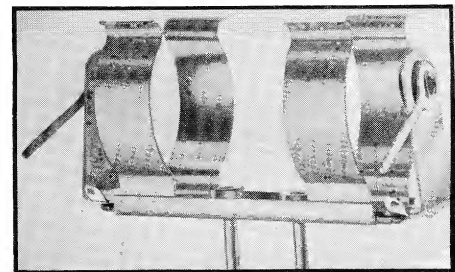
VECTOR Plug-in Battery Clips may be mounted in any "A" pattern VECTORBOARD (.093" dia. holes on .265" spacing) by means of the two Grip Pins mounted on the bottom. Each end of the clip is supplied with a long lug which may be slipped into an adjoining solderless SPRINGCLIP terminal, soldered, wire wrapped or connected with alligator clips. Style B41 Battery Clip is supplied without installed grip pins and may be mounted with screws (not furnished).

ORDERING INFORMATION

Cat. No.	Description	Pkg. Quantity
B41	Battery Clip, Screw mounting style for standard "D" size flashlight cell 1 1/4" dia. x 2-5/16" long	5
B41.1	Battery Clip, Plug-in Style for standard "D" size flashlight cell 1 1/4" dia. x 2-5/16" long	5



ILLUSTRATED BATTERY CLIP CONTACTS CONNECTED TO SPRINGCLIPS. ALSO SHOWN PATCH-CORD K6.06 PLUGGED INTO SPRINGCLIPS.



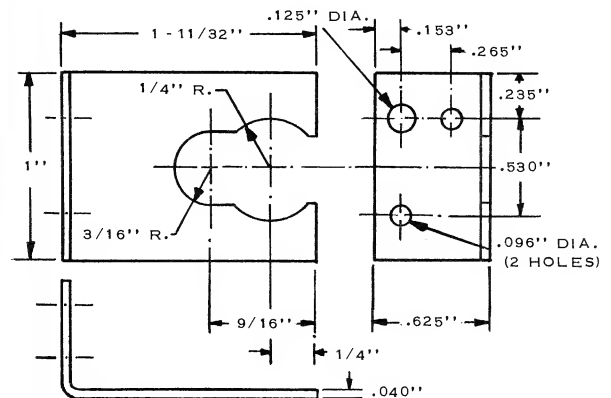
B41.1 SUPPLIED WITH TWO GRIP-PINS FOR PLUGGING INTO "A" PATTERN VECTORBOARD

PLUG-IN "POT" AND SWITCH BRACKETS

VECTOR Plug-in Pot and Switch brackets plug into any "A" pattern VECTORBOARD (.093" dia. holes on .265" spacing) by means of the two grip pins mounted on the bottom. 3/8" and 1/2" diameter shafts are readily mounted to the brackets. 1/4" shafts can be mounted in brackets shown by using two washers slipped onto the shaft so that the bracket is "sandwiched" between them prior to tightening the pot shaft nuts. Screw-mounting type pot brackets also available listed below. (See Bracket Section X, p. 1 for details).

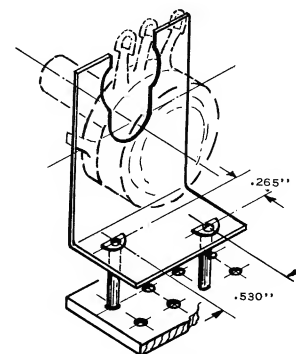
ORDERING INFORMATION

Cat. No.	Description	Pkg. Quantity
B-20-D	Pot Bracket, Plug-in Style Alum. with 2 mounted Grip Pin	4, 100
B-20	Pot Bracket, Screw Mounting	4, 100
B20A	Pot Bracket "Z" type (see Pg. 1, Sec. X)	4, 100
0311-91-19	Steel washers for adapting 1/4" shafts for mounting in above	100

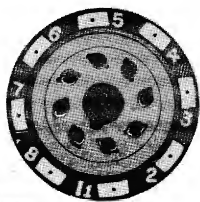


B20-D BRACKET

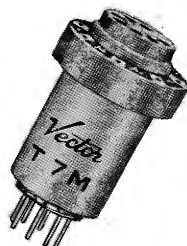
(INSTALLED GRIP-PINS NOT ILLUSTRATED)



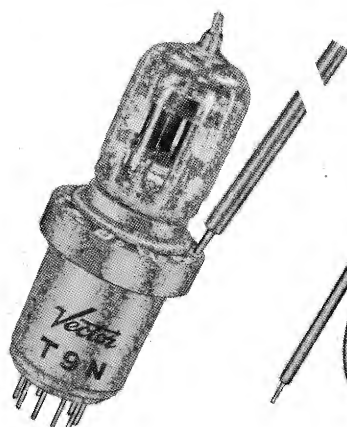
PLUG-IN STYLE B20-D FURNISHED WITH PLUG-IN GRIP-PINS FOR QUICK INSTALLATION



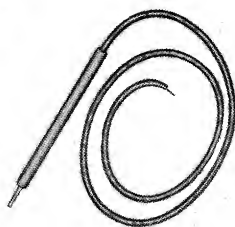
OCTAL



7 PIN MINIATURE



9 PIN NOVAL



P-1 PROBE



T-789 SET

CUT TESTING TIME

Vector Test Adapters are ideal for making voltage, resistance and wave form measurements from the tube side of electronic equipment. In testing, the adapter is inserted between the electronic tube and its socket, completing the circuit. Tests can then be quickly made from the test tab elements without disturbing the chassis and saving time and effort.

RECESSED, SHOCK-PROOF TEST TABS

Each adapter has straight through plug to socket connections extended to radial test tabs on the adapter skirt surrounding the socket. These tabs are located above the adapter skirt affording protection for the operator's fingers during insertion and extraction. Socket contacts are beryllium copper for long life. Castings are molded of phenolic material. Adapters fit into the respective shield bases for miniature or noval tubes or into standard tube clamps.

The electrostatic capacity between adjacent leads of the adapters is approximately 1 micro-micro-farad in the unshielded types. The flash over voltage between adjacent terminals is in excess of 1500 volts DC.

PROBE PLUGS INTO TABS

Each test tab is provided with a hole designed to grip a special Plug-in Probe when the latter is pressed in. Tests can then be made without holding the probe in place. One probe is included in each T-789 adapter set or may be ordered separately as P-1.

Test may also be made by clipping an alligator clip across the socket flange.

ADAPTER SETS

The Vector T-429 Test Adapter Set should be in every well equipped Test Laboratory. This Set has all of single adapters shown below neatly arranged in a handy carrying case. With the wide range of adapters supplied, tests can be made on virtually any type of tube which may be encountered.

The Vector T-789 Test Adapter Set combines the three "must have" test adapters; the 7 pin Miniature, Octal and 9 pin Noval, plus a P-1 plug-in probe, all in a handy plastic carrying case. The individual adapters may be obtained separately if desired.

ORDERING INFORMATION

Catalog No.	Tube Type	Body Dia.	Skirt Dia.	Length Less Prongs	Std. Pack Quantity
T-4	4 PIN	1.26	1.56	1.50	6
T-5	5 PIN	1.26	1.56	1.50	6
T-6	6 PIN	1.26	1.56	1.50	6
T-7-O	7 PIN SMALL	1.26	1.56	1.50	6
T-7-L	7 PIN LARGE	1.45	1.75	1.50	6
T-7-M	7 PIN MIN.	0.75	1.03	1.50	12
T-8-O	8 PIN OCTAL	1.25	1.56	1.50	12
T-8-L	8 PIN LOCTAL	1.26	1.56	1.50	6
T-9-N	9 PIN NOVAL	0.87	1.16	1.50	12
T-429	SET OF ABOVE NINE TYPES IN CASE				1
T-789	SET OF T-7-M, T-8-O, T-9-N, P1, IN CASE				6
P1	PLUG-IN PROBE WITH 30" LEAD.				12

FACTORY

1100 FLOWER ST. GLENDALE, CALIFORNIA ZIP CODE 91201
TELEPHONE (AREA 213) 245-8971 TWX 213-240-2162

NEW YORK OFFICES

FIFTH AVE. AT 2 W. 45TH NEW YORK 36, NEW YORK
TELEPHONE TN 7-5750 TWX 212-867-6518

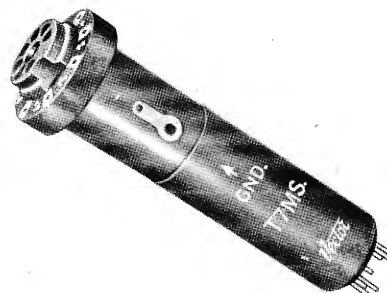
VECTOR ELECTRONIC CO., INC.

Vector

EXTENDED TUBE SOCKET TEST ADAPTERS

For most work the short, unshielded adapters are adequate. For hard to reach locations or where surrounding equipment restricts use of regular test adapters, the 3 to 4 inch extended adapter may be used. In these the leads between plug and socket are individually shielded to minimize coupling. The shield is brought out to a lug on the wall of the adapter and should be connected to the chassis being tested. Capacity to shield is about 8 mmf. per lead.

Catalog No.	Tube Type	Body Dia.	Skirt Dia.	Length Less Prongs	Standard Package
T-7-M-S	7 Pin Min.	0.75	1.03	3.25	6
T-8-O-S	8 Pin Octal	1.25	1.56	4.00	6
T-9-N-S	9 Pin Noval	0.87	1.16	3.25	6
P1	Plug-in Probe with 30" lead.				12
T-789-S	Set of above in case.				1

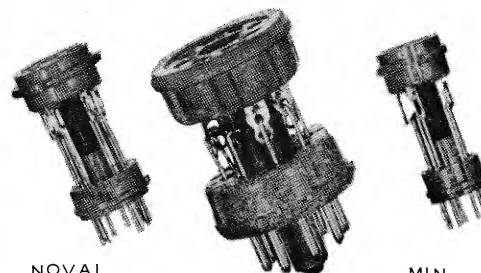


7 PIN EXTENDED T-7-M-S

EXPERIMENTER'S TUBE SOCKET ADAPTERS

These adapters consist of the basic plug and socket structure used in the standard test adapters, but less the outer shell and tabs. Connecting pins from the plug are extended to, but not soldered to the socket terminals. The user can easily complete the connection according to his needs. Circuits can be readily opened for current measurements, or crossconnected in a multitude of ways for experimental purposes. With the TX-789 adapter set, the user may switch sockets and plugs to achieve various combinations.

Catalog No.	Tube Type	Length Less Prongs	Standard Package
TX-7-M	7 Pin Min.	1.41"	6
TX-8-O	8 Pin Octal	1.45"	6
TX-9-N	9 Pin Noval	1.41"	6
TX-789	Set of above three		6



NOVAL

TX-9N

OCTAL TX-8-O

MIN

TX-7M

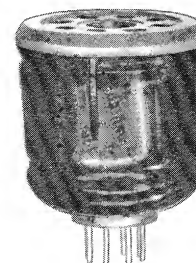
EXPERIMENTER'S SOCKET CHANGE ADAPTERS

Socket Change Adapters are used for plugging unlike tube bases into existing sockets for changing tube types. Most used combinations are listed but almost any other can be supplied. To order adapters less outer shell, delete "S" from catalog number.

Catalog No.	Socket	Plug	Package
T780-S	7 Pin Min.	8 Pin Octal	6
T79-S	7 Pin Min.	9 Pin Noval	6
T807-S	8 Pin Octal	7 Pin Min.	6
T809-S	8 Pin Octal	9 Pin Min.	6
T97-S	9 Pin Noval	7 Pin Min.	6
T980-S	9 Pin Noval	8 Pin Octal	6
T78L-S	7 Pin Min.	8 Pin Octal	6
T98L-S	9 Pin Noval	8 Pin Octal	6



T-79 S
SHOWN LESS SHELL



T-807 S

SOCKET EXTENDERS

SOCKET EXTENDERS provide replaceable units useful in tube testers and similar equipment. Wear is thereby shifted from the socket built into the tester to the one in the extender. When the extender is worn out, a new one can easily be inserted. Thus, it is possible to lengthen the life of expensive test equipment.

Sockets have highest grade beryllium copper contacts. If it is desired to lock the extender in place, a nut can be screwed on a long screw projecting through the plug and thence through the test equipment socket. Socket-to-plug leads are soldered, 1 to 1, 2 to 2, etc., and an outer shell is bonded in place.

Socket Extenders are available in seven-pin or nine-pin miniature and in eight-pin octal types.

Catalog No.	Socket Type	Outer Diameter	Length Less Prongs	Package Quantity
1262	8 Pin Octal	1-1/4"	1"	6
1263	9 Pin Noval	13/16"	7/8"	6
1264	7 Pin Min.	3/4"	7/8"	6



1264

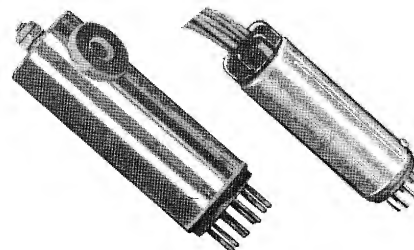
1262

1263

CABLE CONNECTOR PLUGS

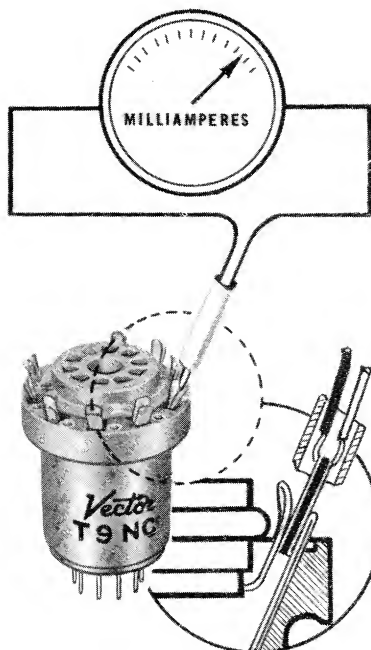
These permit connecting cables to miniature and noval tube sockets. Aluminum shells are fitted to the 7 and 9 pin tube base plugs. In type "C" a rubber grommet (with 1/4" hole) is mounted in the side wall and a center screw holds the assembly together. In type "D" a Heyco strain relief grommet is mounted in the end of the shell and base screws hold the shell on the plug. Similar connectors for other tube types supplied to order.

Catalog No.	No. of Pins	Outside Diameter	Approx. Length Less Prongs	Package Quantity
P7D	7	5/8"	2.100	6
P9D	9	3/4"	2.100	6

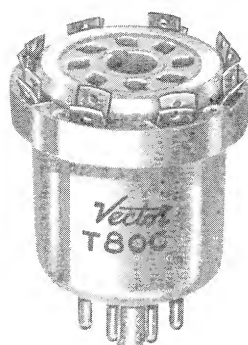


P7C

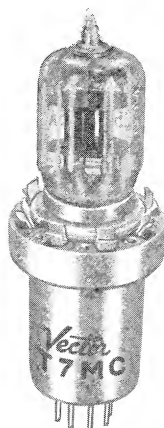
P9D



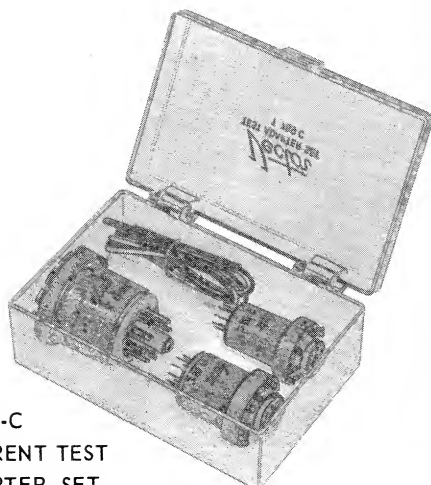
9 PIN NOVAL
WITH P-2 PROBE



8 PIN OCTAL



7 PIN MINIATURE



T-789-C
CURRENT TEST
ADAPTER SET

MEASURE CURRENT OR VOLTAGE WITHOUT CUTTING LEADS

Unique Vector current test adapters make possible tube circuit current or voltage measurements without cutting leads or making computations. All measurements may be made from the tube side of the electronic equipment without disturbing the chassis. In testing, the adapter is placed between the electronic tube and the socket completing the circuit and providing test tab elements. Adapters fit into shield bases for miniature and noval types or into standard tube clamps.

DOUBLE TEST TABS

Each test tab consists of a pair of spring contact elements which are separated electrically when the insulated dual side P-2 test probe is inserted. The pairs of elements are connected to the respective adapter prong and socket contacts. Insertion of the unique test probe "breaks" the circuit and provides current reading through the meter to which the two probe leads have been connected. If only voltage readings are desired the two leads can be connected jointly to a voltmeter. The electrostatic capacity between adjacent leads of the adapter is approximately 1 micro-micro-farad. The flash-over voltage between adjacent terminals is in excess of 1500 volts DC.

OTHER USES

Voltage and Wave Form Measurements may be made using the single sided P-1 probe supplied with the earlier Vector tube socket test adapter kits. For laboratory or experimental work the adapters provide an ideal method for adding resistors or capacitors in series with tube elements or for connecting leads to external circuits.

P-2 Dual Side Plug-in Probe supplied with T-789-C set (See table).

The Probe when inserted between the pairs of test tab elements is gripped tightly and need not be held in place. A thick strip of mylar insulation is used between the two sides of the probe.

ORDERING INFORMATION

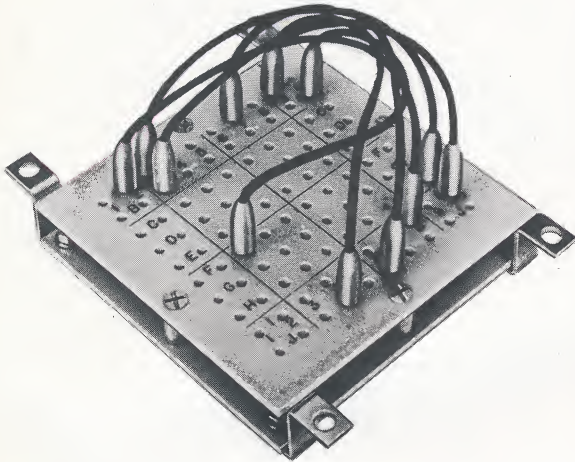
CATALOG NUMBER	SOCKET TYPE	SHELL BODY DIA.	SHELL SKIRT DIA.	LENGTH LESS PRONGS
T-7-M-C	7 PIN MIN.	0.74"	1.03"	1.47"
T-8-O-C	8 PIN OCT.	1.26"	1.56"	1.50"
T-9-N-C	9 PIN NOV.	0.87"	1.16"	1.47"
P-2 PROBE - REQUIRED FOR USE WITH INDIVIDUAL ADAPTERS				
T-789-C	SET OF ABOVE 3 ADAPTERS WITH P-2 PROBE IN CASE.			

SPECIFICATIONS

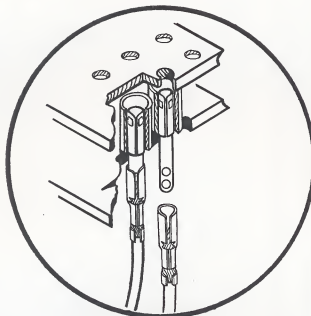
SOCKET AND PLUG CASTING	T-7-M-C, T-9-N-C AND T-8-O-C; MICA-FILLED PHENOLIC, GRADE MFE.
SOCKET CONTACTS	T-7-M-C AND T-9-N-C; BERYLLIUM COPPER, GOLD PLATED.
	T-8-O-C; BERYLLIUM COPPER, SILVER PLATED.
TEST TABS	T-7-M-C AND T-9-N-C; BERYLLIUM COPPER, GOLD PLATED.
	T-8-O-C; PHOSPHOR BRONZE, NICKEL PLATED GOLD FLASH.
PLUG PRONGS	T-7-M-C AND T-9-N-C; PHOSPHOR BRONZE, CADMIUM PLATED.
	T-8-O-C; BRASS, NICKEL PLATED.
SHELL	PHENOLIC, GRADE CFG.

INTRODUCTION

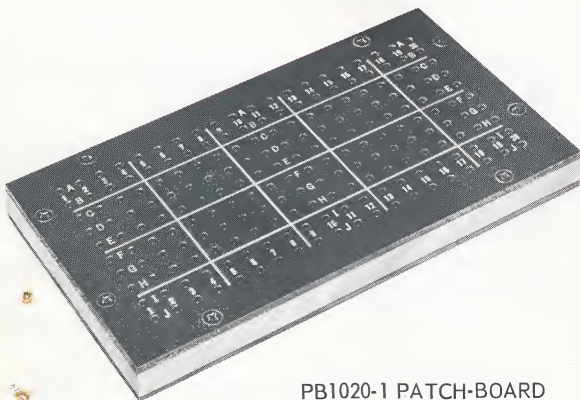
Vector patchboards provide reliable and economical means for quickly connecting or disconnecting large numbers of contacts. Two types are available - "FIXED PANEL" and "PRE-PROGRAMING" (Removable Panel), each in a variety of stocked sizes. Many variations of sizes, materials, hole patterns, printing and color variations can be obtained at extra cost.



PB 1010
PATCH-BOARD



RECEPTACLE DETAIL
TABS WITH SOLDERLESS SLIP-ON
CONTACT CRIMPED TO WIRE



PB1020-1 PATCH-BOARD

The simplest and most economical type is the FIXED PANEL patch-board which utilizes banks of highly reliable "wrap-around" contacts mounted in insulating panels. Round pin plugs connected to flexible insulated wires plug into and interconnect contacts as desired. FIXED PANEL patchboards with low cost patch cords are compact, yet provide a connection facility similar to that of larger cordless type boards. Prices are lower than for most comparable patchboards. FIXED PANEL patchboards are recommended for test panels, automation and telemetry equipment, low cost computers, numerical control equipment, paging and speaker systems or other equipment where economy and connection multiplicity are desired.

A second type is the PRE-PROGRAMING type patchboard. This will quickly change a large bank of contacts. Ball detent type plugs are inserted in a removable patch panel which is placed into the receptacle frame. When the locking handle is pushed down, plug tips are forced against contact springs. Thus quick connection of a group of contacts is effected. PRE-PROGRAMING patchboards are used where rapid changes are necessary, as in test and control equipment, computers, data processing equipment, machine control and automation equipment. Because of the quick change feature, cost is higher than with the FIXED PANEL type patchboards. PRE-PROGRAMING patchboards are described in greater detail on pages 5-8, Sec. XIII.

FIXED PANEL STANDARD PATCHBOARDS

These are available in "off-the-shelf" units of 10 to 300 receptacles. Other sizes may be obtained by stacking patchboards adjacent to one another.

Panels - Both front and back panels are furnished as standard in black XXXP Phenolic. Cat. No. PB1010 is also offered as standard in Ivory Epoxy-Paper. Alpha-numeric lettering is provided on both front and back panels. Numbers, starting with numeral 1, read horizontally from the left (as viewed from the plug side of the board). Letters, starting with "A", read down from the top. Holes for plugs are .093" diameter, spaced on .265" centers. Front panels are screwed to the back panel and may be changed if necessary.

Receptacles - Terminal receptacles are Beryllium copper, .0002" nickel plated, plus .00003" gold flash per Mil G-45204 with two .089" diameter holes in solder tabs. (Tabs without the holes are available for use with wire-wrap). Permanent connection to the contacts are made by (1) soldering or (2) solderless slip-on contacts crimped to wires or (3) by wire-wrap for which hand or power tools are available. Contacts may also be strapped together by means of a bus strip.

SPECIFICATIONS

Maximum Current: 5 amps. Contact Resistance: <.001 ohms. Capacitance between adjacent contacts: <1.0 pf. Resistance between adjacent contacts: >10,000 megohms. Maximum operating voltage: >1500v. D.C. or 1000v. A.C.

Patch Cords - Single, piggy-back, and multiple patch cords are available in various color coded lengths. A two prong shorting plug is also available. For making patch cords of special length or type, Vector offers the necessary parts (see page 4).

STANDARD FIXED PANEL UNITS WITH 9 TO 50 CONTACTS

These units have front and back panels of black XXXP Phenolic, Type PBE-P, Grade 810 per Mil P-3115, .093" thick. Holes are .093" spaced on .265" centers. Lettering is white. (Panels can be supplied in ivory Epoxy-paper with black lettering on special order.) A center panel provides contact separation and is held in position by spacers. (see figure). Sides are enclosed for dust protection. Receptacles are tab type for soldering or slip-on contacts (per page 4) or wire wrap type if so specified. Patchboards are available in 9, 10, 20 or 50 contact receptacle units in this group.

ORDERING INFORMATION

CAT. NO.	NO. OF RECEPTACLES			DIMENSIONS		NO. OF BRACKETS
	ACROSS	DOWN	TOTAL	A	B	
PB33-1	3	3	9	1.4	.94	2
PB110-1	10	1	10	3.25	.40	2
PB210-1	10	2	20	3.25	.67	2
PB510-1	10	5	50	3.25	1.46	4

NOTE: ADD LETTER "A" TO CAT. NO. IF WIRE-WRAP TABS ARE DESIRED. (SMALL SET-UP CHARGE).

STANDARD FIXED PANEL UNITS WITH 200 & 300 CONTACTS AND METAL CHANNELS

These larger units are similar to the 9 to 50 contact units except that aluminum channels enclose the sides for greater rigidity. (see page 3)

ORDERING INFORMATION

CAT. NO.	NO. OF RECEPTACLES			DIMENSIONS		NO. OF BRACKETS
	ACROSS	DOWN	TOTAL	A	B	
PB1020-1	20	10	200	6.03	3.38	4
PB1520-1	20	15	300	6.03	4.70	4

NOTE: ADD LETTER "A" TO CAT. NO. IF WIRE-WRAP TABS ARE DESIRED. (SMALL SET-UP CHARGE).

STANDARD FIXED PANEL UNITS WITH 100 CONTACTS

100 contact units have two panels mounted in sandwich-like fashion with four spacers. Individual insulating spacer protect receptacles. Panels are available in both black Phenolic or in ivory color Epoxy-paper, Type PEE, Per Mil P22324 with black lettering. Hole spacing and receptacle specifications are the same as for other patchboards.

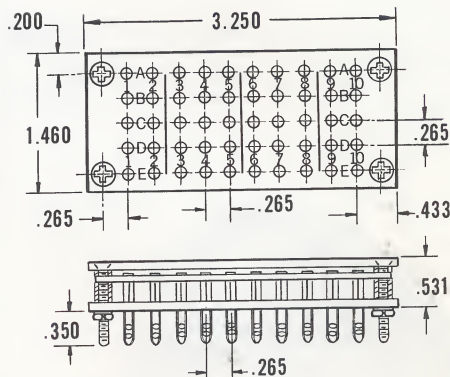
ORDERING INFORMATION

CAT. NO.	COLOR	NO. OF RECEPTACLES			DIMENSIONS		NO. OF BRACKETS
		ACROSS	DOWN	TOTAL	A	B	
PB1010	IVORY	10	10	100	3.25	3.25	4
PB1010-1	BLACK	10	10	100	3.25	3.25	4

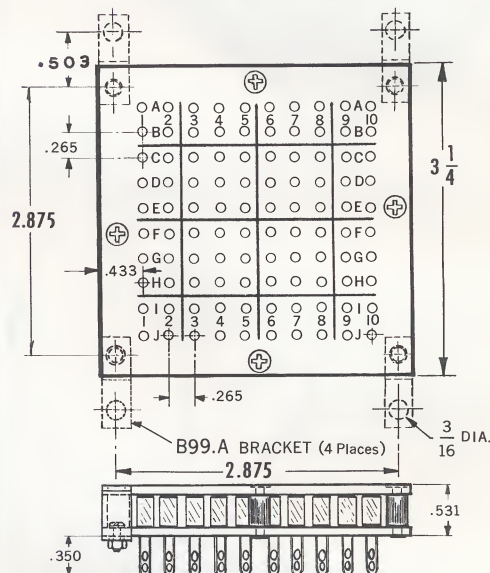
NOTE: ADD LETTER "A" TO CAT. NO. IF WIRE-WRAP TABS ARE DESIRED. (SMALL SET-UP CHARGE). FOR INFORMATION ON PATCH CORDS AND SOLDERLESS SLIP-ON CONTACTS FOR USE WITH THE ABOVE PATCHBOARDS. SEE PAGE 4.

1100 Flower St. Glendale, Calif. 91201 Area-213 Phone 245-8971
TWX 213-240-2162

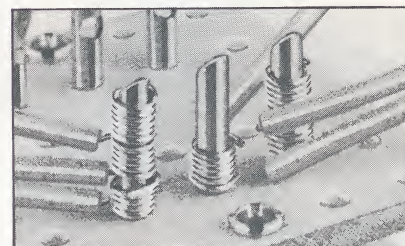
PB510-1 PATCH-BOARD



SIDE VIEW WITH DUST COVER REMOVED

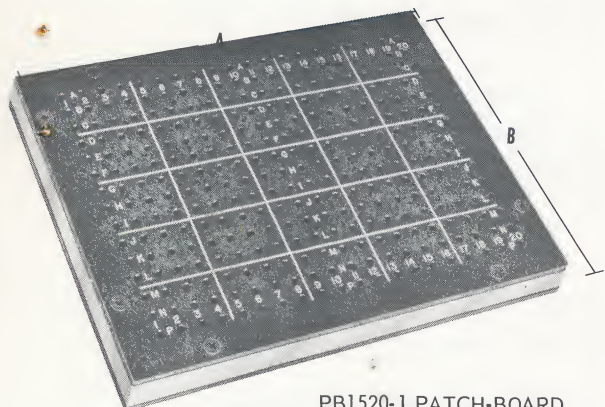


PB1010, PB1010-1 PATCH-BOARD

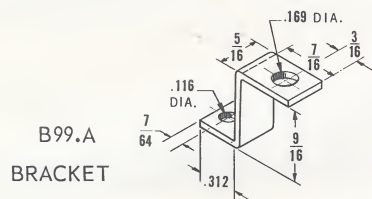


WIRE -WRAP CONNECTIONS

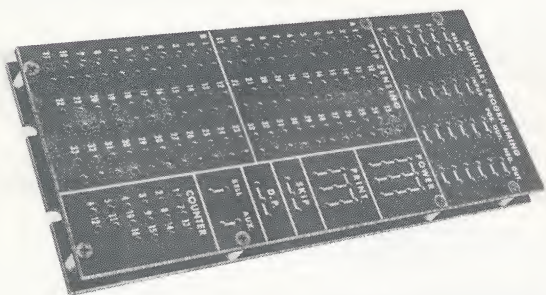
VECTOR ELECTRONIC CO., INC.



PB1520-1 PATCH-BOARD



B99.A
BRACKET



CUSTOM PATCH-BOARD



BARB TYPE RETAINER RINGS
INSTALLED ON K2.06

Barb type retainer rings are available which slip over .091" diameter plug prongs retaining them in joiner strips providing a multiple connection. A small piece of pattern "A" Vectorbord makes an ideal joiner strip. (See illustration above). P130 insertion tool is for use in inserting prong in rings. (ordering information pg. 4)

WIRE WRAP CONNECTIONS

The regular contact tabs but without holes can be furnished in place of the two hole solder tab contacts to permit up to three wire-wrap connections per tab. (see page 2) If wire-wrap connections are desired in place of solder tab specify catalog number of standard board plus letter "A" at end of number. Gardner-Denver wire-wrap tools No. A-18635 for the bit and No. 18640 for the shell are recommended to wrap No. 20, 22 or 24 solid copper wire in Gardner-Denver power drivers. A Gardner-Denver hand tool for this purpose is also available. Gardner-Denver Cat. No. A-20557-16.

MOUNTING INFORMATION-STANDARD UNITS AND "Z" BRACKETS

Units having the same width can be stacked vertically or units having the same height can be joined in a horizontal line. For this purpose stacking bars should be drilled as required for the particular units. Standard bar stock can be used or if desired, Vector will make as required. Metal frame patchboards PB1020 & PB1520 can also be joined by screwing or riveting the adjacent aluminum channels together.

"Z" brackets (B99A) are furnished with all patchboards for mounting.

SPECIAL FIXED PANEL PATCHBOARDS

The standard patchboards previously listed are the more popular types. However, "custom" patchboards can be made at moderate extra. cost. Easily obtained variations are described in the following paragraphs. Boards can be supplied with Epoxy-paper or Epoxy-glass insulation and also with color overlay.

Size Factors: Larger size patchboards may be ordered up to maximum dimensions of 15" x 36". However, it is preferable to use several smaller units mounted contiguously rather than one large unit. In large patchboards, reinforcing bars are required for panel support Bars are appropriately spaced at 6-10 inches, hence when ordering, customer should allow for blank rows or columns. The customer may figure his panel dimensions using the standard pitch distance of 0.265" and computing the center to center distance of the outermost plug holes. If blank positions are called for, these should be on the 0.265". The overall patchboard panel width or height will be 1" greater than the center-to-center distance mentioned above. Aluminum channels will be used to frame the units (excepting those with less than 100 contacts.) Panels may be provided with entire rows of holes eliminated. However, if holes are to be eliminated at random or if a grid other than a 0.265" is needed, panels must be drilled.

Color: Many variations in color are possible. Black is available in phenolic or with Epoxy-glass having an overlay. Epoxy-paper has an ivory color. Epoxy-glass is supplied in an attractive tan color. On special order, boards may be coated with Epoxy paints in a variety of colors or provided with overlays of Du Pont Tedlar colored films. Standard colors in this latter material are granite gray, spruce green, beige, georgian gold, sunlight yellow or shell white. Color samples are available on request.

Printing: Special silk-screening or printing of letters, numerals or symbols in desired colors can be provided to customer specifications. Attractive appearance is obtained with alternate squares of varied color. Letter press printing is generally used for single color small panels for economy while silk-screening is used for larger boards and multi-color effects. Unprinted boards supplied if user wishes to mark his own. Vector now has available 'NUMLETR' transfer sheets that make it possible to rub-on an entire sequence of letters or numbers. Characters are the same type found on printed boards and spaced on a 0.265" grid to fit standard patchboards.

PATCH CORDS FOR FIXED PANEL PATCHBOARDS

Patch cords are available in six types: (1) Single plug at each end of a single conductor, (2) Single plug at one end and 2 plugs in common at other end, (3) Single plug at one end and 3 plugs in common at other end, (4) Piggy-back type plugs at each end of a single conductor, (5) Piggy-back type plug at one end and standard single plug at other end of a single conductor, (6) 2 prong jumper.

Patch cords are offered in color coded lengths: 6" black, 9" yellow and 15" blue. Plug prongs are nickel plated brass. .091" diameter with gray insulated handles. These can also be supplied with special gold plate. Length of prongs is approximately 1". Overall length shown below is from tip to tip. Cords are No. 20 gauge vinyl insulated stranded wire. 2 prong jumper has gray insulating cover.

ORDERING INFORMATION

TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	OVERALL LENGTH	CORD OF BODY COLOR
K2.06	---	---	K9.06	---	---	6"	BLACK
K2.09	K11.09	K12.09	K9.09	K10.09	---	9"	YELLOW
K2.15	K11.15	K12.15	K9.15	K10.15	---	15"	BLUE
---	---	---	---	---	K2.02-1	JUMPER	GRAY

Note: Add letter "G" to Cat. No. for special gold plate prong.

MATERIALS FOR USER ASSEMBLED PATCH CORDS

Plug tips are crimped or soldered by user to No. 20 gauge wire with a T7.39 eyelet wedged into the plug well for firm backing. A P127 crimping tool is listed. For insulation a heat shrinkable plastic sleeve is available. To join 2 or 3 wires in multiple, the 0077-01/15 splice cap is listed (with nylon shroud). P129 crimp tool is used for this.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION
K-2001	Prong only, nickel plated brass.
KG-2001	Prong only, nickel plated brass, gold flash.
T7.39	Eyelet, cad. plated brass for attaching wire to prong.
0677/12	Thermofit sleeving for single prong. .187" I. D., 3/4" length.
0677/14	Thermofit sleeving for 2 prong plug assembly.
0677/15	Thermofit sleeving for 3 prong plug assembly.
0077-44/4	Extruded plastic spacer for multiple prong assemblies, 0.2" wide, 1/2" long.
0077-01/15	Insulated splice cap for joining cords in common connection.
P129	Crimping tool for insulated splice cap.

SLIP-ON CONTACT FOR TAB TO WIRE CONNECTION

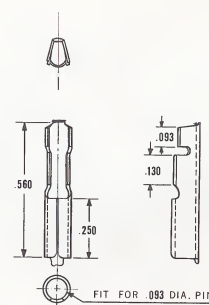
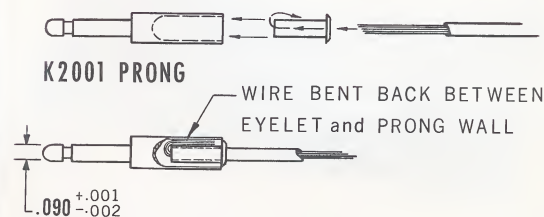
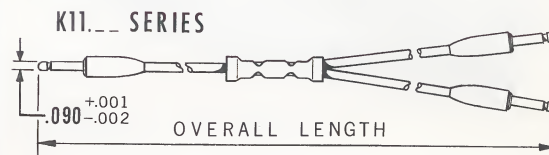
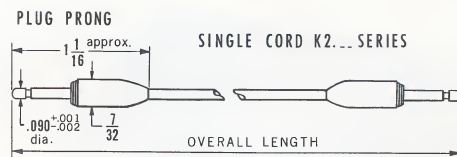
The solderless, easy to use slip-on contact fits snugly on contact tabs on the back panel of the patchboard. For use with No. 18-22 gauge wire with insulation: .045" to .085" in diameter. Contact is nickel plated brass, gold flashed. Use P115 staking tool for attaching wires to the contact. (ordering data bottom of page).

ACCESSORIES

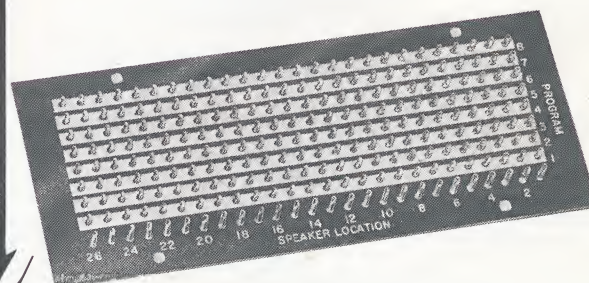
Bus Strips for strapping contacts on back panel of patchboards slip over contact tabs in either direction of the panel. They can be easily cut to any desired length. Strips are connected to tabs by solder (preferably dip soldering). This can be readily done to order at the factory. Bus strips are approximately 0.2" wide with .093" holes on .265" centers. Material is copper alloy with solderable plating.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION
1723/1	Slip-on contact - Brass, tin plated
1723B/1	Slip-on contact - Brass, nickel plated and gold flash
P115	Staking tool for staking wire to slip-on contact
T57	Bus strip, 15.9" length
T58	Bus strip, 7.9" length
0910-10	Retainer ring for .091" plug
P130	Insertion tool for retainer ring



SLIP-ON CONTACT



BACK PANEL WITH BUSS STRIP

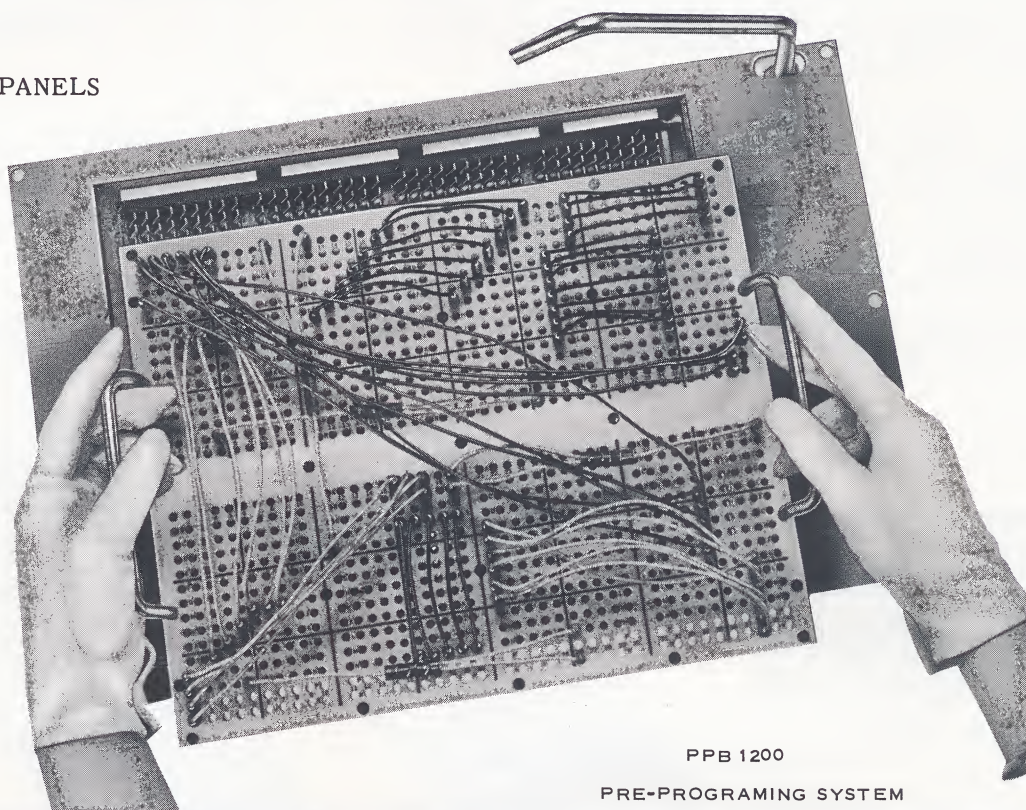
PRE-PROGRAMING PATCHBOARD SYSTEMS

Vector Pre-Programing Patchboards permit rapid change of programs for test and control equipment, digital and analog computers, data processing equipment and automation equipment any electronic equipment where flexible control is required.

Removable Patch Panels into which Patch Cords are inserted carry a prearranged set of connections. The desired patch panel is placed in the aperture of a fixed contact frame and contact made therewith by depressing a hand lever.

FEATURE

- RAPID CHANGE OF PATCH PANELS
- RELIABLE CONNECTIONS
- ECONOMY
- LONG LIFE
- LOW NOISE CONTACTS
- FLEXIBILITY
- RUGGED CONSTRUCTION
- FLUSH PANEL MOUNTING



PPB 1200

PRE-PROGRAMING SYSTEM

Standard sizes of 204, 300, 450, 600, or 1200 contacts are currently available. For 2400 contacts, two units of 1200 contacts each are interlocked. Similarly, 1800 contact or 3600 contact systems are readily made from multiples of basic units.

Where quantity justifies, systems with non-standard number of contacts of special size can be made to order. The Vector Pre-Programing System consists of three parts: the Receptacle Frame, the Removable Patch Panel, and the Patch Cords.

RECEPTACLE FRAME

The Receptacle Frame is the main structural unit which is permanently installed in the system. This unit contains the operating mechanism and the permanently wired contacts to serve as a receptacle for the pre-programed Patch Panels. The frame is ruggedly constructed of cadmium plated spot welded steel. The front panel is painted a light gray to MIL-E-15090, unless otherwise ordered. The back board assembly of the contact panel is an epoxy laminate and is marked with a standard alpha numeric legend, unless otherwise specified.

Contacts springs are beryllium copper, heat treated nickel plated to MIL-QQ-N-290 with solder dipped tabs or nickel plate and gold flash .00003". The tab of the spring contact has two holes in the standard version and may be soldered or used with solderless slip on contacts. (See below). The holes are omitted in the wire wrap tab to permit three wire-wrap connections. † (See photo below).

The Patch Panel is placed in the aperture of the Receptacle Frame and engaged with the rear contacts by the lever-actuated mechanism which causes the contacts to wipe across the protruding plug tips of the Patch Panel. Precision manufacturing insures positive alignment of contacts.

The construction permits changes in patching to be made while the Patch Panel is locked in place. Adapter plates can be supplied to mount all units on 19" wide racks.

Damaged contacts can be easily removed and replacements installed in the contact panel.

† KELLER WIRE WRAP TOOLS NO. A-18635 FOR THE BIT AND NO. 18640 FOR SHELL ARE RECOMMENDED TO WRAP NO. 20, 22, OR 24 SOLID COPPER WIRE.

PATCH PANEL

The Patch Panel is a removable Patchboard into which Patch Cords can be pre-plugged and stored for immediate use whenever a change of connections is required. The Panel is locked firmly into place in the Receptacle Frame with a simple lever mechanism. The precision punching of the Panels assures alignment and positive contact between the pre-arranged patch cord prongs and the spring contacts of the Receptacle Frame.

The Patch Panels are made of gold-beige colored epoxy laminates. Black or any special colored panels may be ordered.

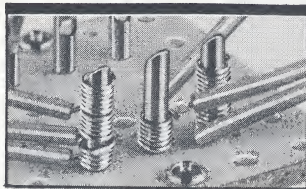
The patch cord plug tips extend through .156" holes on 0.265" centers to engage the spring contacts of the Receptacle Frame.

Patch Panels with letter "A" in catalog number are silk screened with Vector Standard Alpha Numeric Legend. Absence of letter "A" indicates panels are unmarked for identification by customer. Specially marked and colored panels can be supplied at additional cost. Brown line prints of patch panels are available for customer patching layouts.

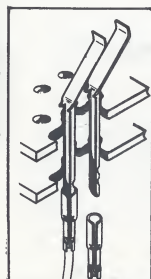
Protective feet are provided to permit storage of pre-arranged programs without danger of unseating or damaging the patch cord plug tips.

Covers are available to protect programed panels in storage or during operation. Mounting hardware is furnished with covers.

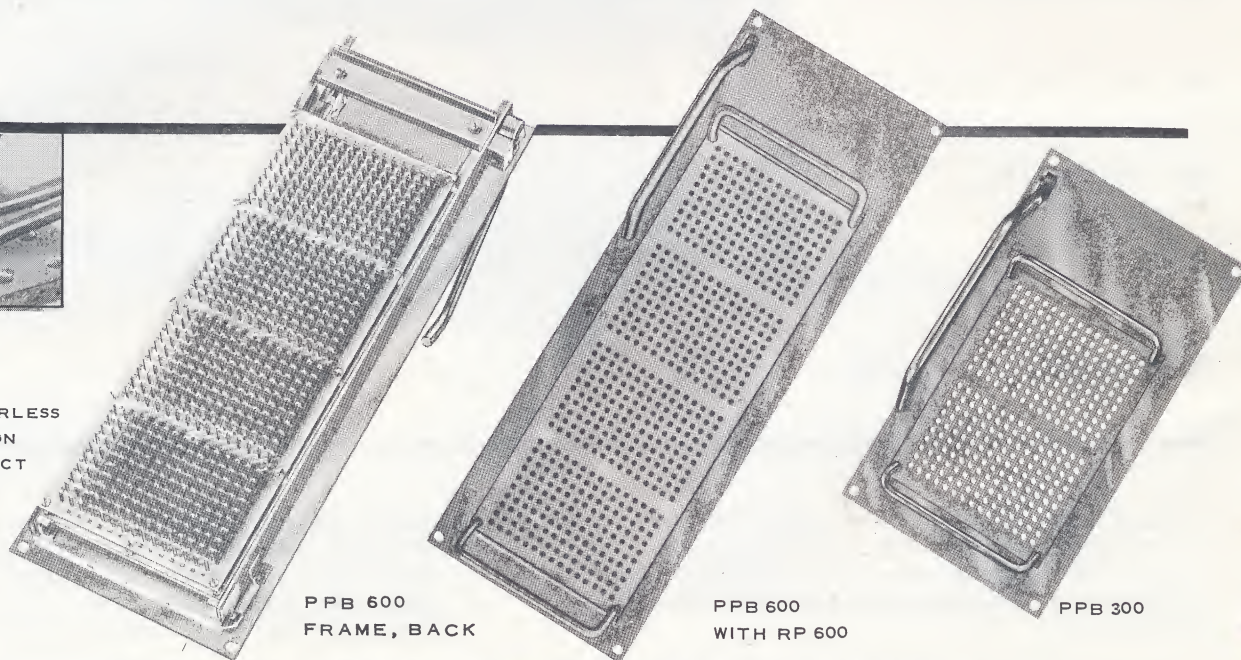
In multiple-board installations, polarization can be supplied to prevent insertion of a program board into the wrong receptacle.



† WIRE-WRAP CONNECTIONS



SOLDERLESS
PUSH-ON
CONTACT



PPB 600
FRAME, BACK

PPB 600
WITH RP 600

PPB 300

ORDERING INFORMATION

RECEPTACLE FRAME

MATING PATCH PANEL

CATALOG NO.	CONTACTS		DIMENSIONS			CONTACTS / HOLES			CATALOG NO.	DIMENSIONS		
	TAB STYLE	PLATING	W.	H.	DEPTH BEYOND PANEL	NUMBER	ARRANGEMENT			W.	H.	D.
							W.	H.				
PPB204	SOLDER	NICKEL	10 1/4"	6"	2-5/8"	204	17	12	RP204	6-3/16"	4-5/8"	1"
PPB204A	WIRE WRAP	NICKEL	10 1/4"	6"	2-5/8"	204	17	12	AND	6-3/16"	4-5/8"	1"
PPB204G	SOLDER	GOLD	10 1/4"	6"	2-5/8"	204	17	12	RP204A *	6-3/16"	4-5/8"	1"
PPB300	SOLDER	NICKEL	10 1/4"	6"	2-5/8"	300	20	15	RP300	6-3/16"	4-5/8"	1"
PPB300A	WIRE WRAP	NICKEL	10 1/4"	6"	2-5/8"	300	20	15	AND	6-3/16"	4-5/8"	1"
PPB300G	SOLDER	GOLD	10 1/4"	6"	2-5/8"	300	20	15	RP300A *	6-3/16"	4-5/8"	1"
PPB450	SOLDER	NICKEL	16"	6"	2-5/8"	450	30	15	RP450	12"	4-5/8"	1"
PPB450A	WIRE WRAP	NICKEL	16"	6"	2-5/8"	450	30	15	AND	12"	4-5/8"	1"
PPB450G	SOLDER	GOLD	16"	6"	2-5/8"	450	30	15	RP450A *	12"	4-5/8"	1"
PPB600	SOLDER	NICKEL	16"	6"	2-5/8"	600	40	15	RP600	12"	4-5/8"	1"
PPB600A	WIRE WRAP	NICKEL	16"	6"	2-5/8"	600	40	15	AND	12"	4-5/8"	1"
PPB600G	SOLDER	GOLD	16"	6"	2-5/8"	600	40	15	RP600A *	12"	4-5/8"	1"
PPB1200	SOLDER	NICKEL	17"	10 3/4"	2-5/8"	1200	40	30	RP1200	12"	9-3/8"	1"
PPB1200A	WIRE WRAP	NICKEL	17"	10 3/4"	2-5/8"	1200	40	30	AND	12"	9-3/8"	1"
PPB1200G	SOLDER	GOLD	17"	10 3/4"	2-5/8"	1200	40	30	RP1200A *	12"	9-3/8"	1"

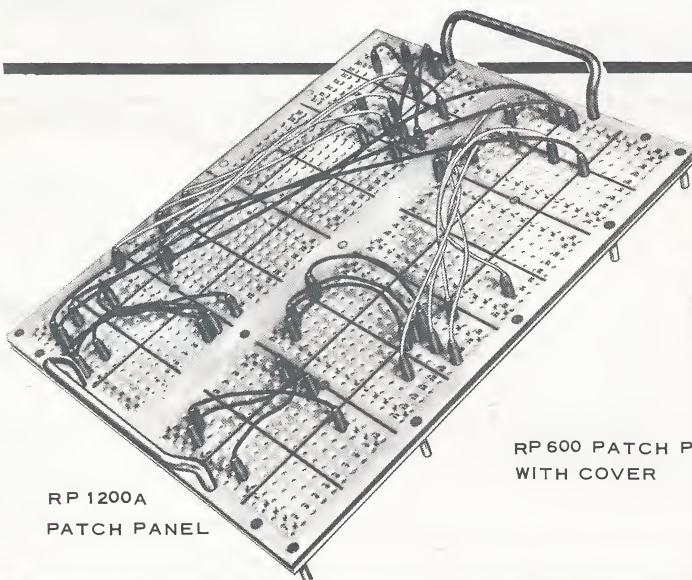
RECEPTACLE FRAMES AND REMOVABLE PANELS FOR 1800, 2400, OR 3600 CONTACT SYSTEM ARE SUPPLIED ON SPECIAL ORDER AS MULTIPLES OF UNITS SHOWN ABOVE. REPLACEMENT CONTACTS: T55 NICKEL PLATED. (T55G FOR GOLD) CONTACT WITH TWO HOLES FOR SOLDERED WIRE CONNECTIONS OR SLIP-ON CONTACT; T56 NICKEL PLTD. AND T56G GOLD FLASHED NICKEL FOR WIRE WRAP (NO HOLES).

SPECIFICATIONS: OPERATIONAL; MAXIMUM OPERATING VOLTAGE 1500 V.D.C. OR 1000 V.A.C.

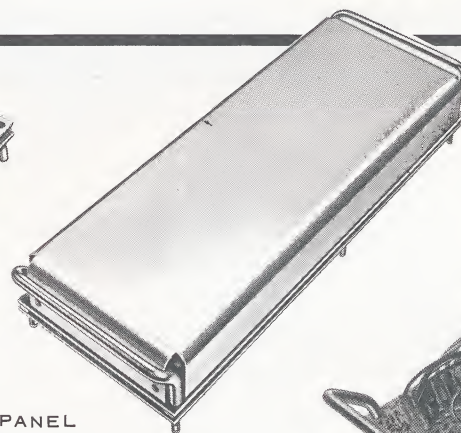
LEAKAGE RESISTANCE BETWEEN ADJACENT CONTACTS: IN EXCESS OF 500,000 MEGOHMS.
CAPACITANCE BETWEEN ANY TWO CONTACTS 2.5 MMFD. MAX.

TOTAL RESISTANCE AT CONTACT - LESS THAN .01 OHMS FROM NICKEL PLATED CONTACT TO NICKEL PLTD. PLUG LESS THAN .003 OHMS FOR GOLD FLASHED CONTACTS TO GOLD FLASHED PLUGS.

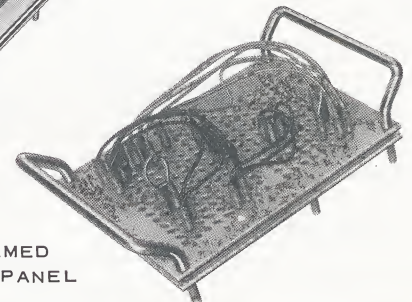
*ADD "A" TO PATCH PANEL NO. FOR ADDITION OF ALPHA NUMERIC LETTERING.



RP 1200A
PATCH PANEL



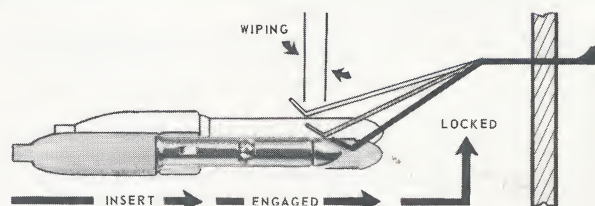
RP 600 PATCH PANEL
WITH COVER



PROGRAMED
PATCH PANEL

CONTACT WIPING ACTION

To insure positive reliability of contact, the tips of the patchcord prongs are wiped by the contact springs when the Patch Panel is engaged by the Receptacle Frame. This is accomplished by operating the lever mechanism which moves the Patch Panel 3/32" across the contacts and locks it in position. A constant contact pressure of 6 to 14 oz. per contact is maintained when the Patch Panel is locked in position.



PATCH CORDS AND SOLDERLESS SLIP-ON CONTACT

Patch Cords are available in four color-coded lengths -- 6" (black), 9" (yellow), 15" (blue), and 24" (green). Plugs on the cords are the ball detent type which remain firmly in place until removed. The connector assembly can be used to join 3 patch cords in common. Conductors used with the ball detent cords are of 20AWG wire (19 strands of No. 32 tinned copper) insulated with poly-vinyl chloride (PVC). Plugs are brass, nickel plated .0002" or Gold plated .00003" over nickel.



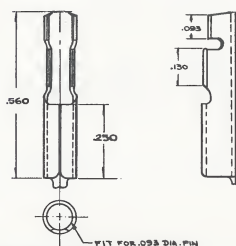
SINGLE CONDUCTOR



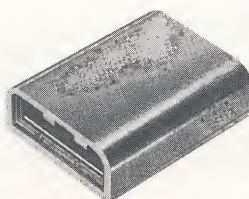
3-PRONG COMMON CONDUCTOR



4-PRONG COMMON CONDUCTOR



SOLDERLESS
CONTACT
SLIP-ON TYPE



COMMON
CONNECTOR
ASSEMBLY



0022-11/1 PRONG ONLY



JUMPER PLUG

PATCHCORD CATALOG NUMBER AND STYLE

OVERALL LENGTH	WIRE INSULATION COLOR	SINGLE CONDUCTOR PLUG PLATE		3 PRONG COMMON PLUG PLATE		4 PRONG COMMON PLUG PLATE	
		NICKEL	NKL. GOLD FLASH	NICKEL	NKL. GOLD FLASH	NICKEL	NKL. GOLD FLASH
6"	BLACK	K3.06	KG3.06				
9"	YELLOW	K3.09	KG3.09	K4.09	KG4.09	K5.09	KG5.09
15"	BLUE	K3.15	KG3.15	K4.15	KG4.15	K5.15	KG5.15
24"	GREEN	K3.24	KG3.24	K4.24	KG4.24	K5.24	KG5.24
JUMPER	GRAY	K3.02	KG3.02				
CONN. ASSY.		KP-1					

SOLDERLESS SLIP-ON CONTACT ORDERING INFORMATION

CATALOG NO.	DESCRIPTION
1723/1	BRASS, TIN PLATED FOR 18-22 GAGE WIRE
1723B/1	BRASS, NICKEL PLATED AND GOLD FLASHED FOR 18-22 GAGE WIRE
P-115	HAND CRIMPING TOOL FOR ABOVE (WITH RATCHET)



FIXED PANEL PATCHBOARDS, PATCH CORDS AND ACCESSORIES

APPLICABLE TO SECTION XIII, pp 1-4

FIXED PANEL PATCHBOARDS 1 - 19

CATALOG NO.	Number of Contacts	
PB33-1	9 contacts	\$ 2.95
PB110-1	10 contacts	3.25
PB210-1	20 contacts	4.25
PB510-1	50 contacts	6.45
PB1010	100 contacts	10.75
PB1010-1	100 contacts	10.85
PB1020-1	200 contacts	21.60
PB1520-1	300 contacts	32.35

PATCH CORDS SINGLE,
FOR FIXED PANEL

CATALOG NO.		
K2.02-1	Jumper	2.50/pkg of 25
K2.06	6" Overall	2.00/pkg of 25
K2.09	9" Overall	2.25/pkg of 25
K2.15	15" Overall	2.50/pkg of 25
<u>Piggy Back</u>		<u>1-19</u>
K9.06	6" Overall	\$.93 ea.
K9.09	9" Overall	.93 ea.
K9.15	15" Overall	.93 ea.
		<u>1-39</u>
K10.09	Piggy back/single	16.00/pkg 25
K10.15	" " "	17.00/pkg 25
K11.09	Single/Double	14.50/pkg 25
K11.15	" "	15.00/pkg 25
K12.09	Single/Triple	19.76/pkg 25
K12.15	" "	20.00/pkg 25

MATERIALS FOR USER ASSEMBLED FIXED PANEL PATCH CORDS AND ACCESSORIES

1 - 19

K-2001	Prongs	\$ 2.40/pkg of 100
T7.39	Eyelets	.41/pkg of 100
P 129	Tool	5.88
1723/1	Slip On Contact	3.15/pkg of 100
P 115	Crimping Tool for Slip On Contact (may be rented)	60.00
T 57	Bus Strip	1.10/pkg of 10
T 58	Bus Strip	.70/pkg of 10

Terms Net 30 Days, F.O.B. our plant, Glendale, California

Prices subject to change without notice.



PRE-PROGRAMING PATCHBOARD, PATCH CORDS AND ACCESSORY PRICE LIST (PARTIAL)

APPLICABLE TO SECTION X111, pp 5-8

PRE-PROGRAMING PATCHBOARD RECEPTACLE FRAMES		NICKLE PLATED CONTACTS		GOLD FLASHED CONTACTS	
<u>Number</u>	<u>Contacts</u>	<u>Catalog No.</u>	<u>1-4</u>	<u>Catalog No.</u>	<u>1-4</u>
300	Contacts	PPB300	\$ 105.00	PPB300G	\$ 123.00
600	Contacts	PPB600	125.00	PPB600G	161.00
1200	Contacts	PPB1200	190.00	PPB1200G	262.00

<u>Removable Program Panels</u>	<u>1-19</u>
RP 300	\$ 12.00
RP 600	15.75
RP 1200	18.00

<u>Patch Cords</u>	<u>Per Package of 25</u>	<u>Catalog No.</u>	<u>Per Package of 25</u>
<u>Catalog No.</u>			
K3.02	\$ 2.60	K4.09	\$ 7.50
K3.06	2.60	K4.15	8.50
K3.09	2.85	K4.24	9.25
K3.15	3.35	K5.09	9.50
K3.24	3.75	K5.15	11.00
KP-1	3.25	K5.24	12.25

Slip-On Contact No. 1723/1 \$3.15/pkg of 100; \$27.20/pkg of 1000.

Hand Crimping Tool No. P 115 for attaching slip-on contact to wires - \$60.00
(may also be rented--write factory).

For larger quantity prices or additional information please write to the factory.

Terms: Net 30 days, F.O.B. our plant.

Prices subject to change without notice.

R-244-65-7

VECTOR ELECTRONIC CO., INC.

1100 Flower St. Glendale, Calif. 91201 Area -213 Phone 245-8971

TWX 213-240-2162

STRUCTURES FOR CIRCUITRY

Vector Socket-Turrets are unique terminal structures incorporating tube or transistor sockets and plugs if desired, on which the user may mount and wire circuit components. By this means sub-assemblies are readily formed and these can be quickly installed with a minimum of connections, thus simplifying the construction of electronic equipment.

SPACE UTILIZATION HIGH

Space under the socket, usually wasted, can be utilized for circuit components. When turrets are made pluggable the available space may be filled nearly solid without overcrowding or sacrifice of accessibility since modules may be pulled out for servicing.

TIME SAVER FOR ENGINEERS

Circuits can be wired quickly with very little planning. Troubles caused by stray capacitance, hum pickup and long leads are minimized. If changes are required the entire sub-assembly can be easily removed for repair or replacement.

AN AID TO PRODUCTION

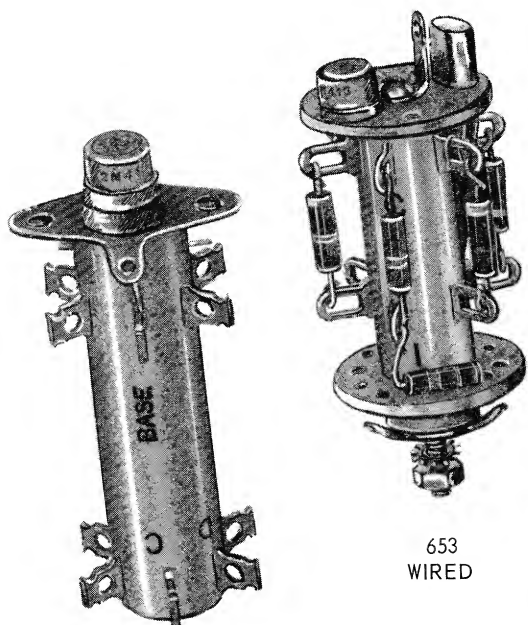
Simplified sub-assemblies can be efficiently produced in small highly accessible modules, easily understood by unskilled wiremen. Cable forms and mounting arrangements are minimized.



8-12

8-N-9 T

WIRED UNITS



8-A-12 T
PLUS TRANSISTOR

653
WIRED

MILITARY AND COMMERCIAL TYPES

Socket-Turrets are made in a wide variety of sizes and types, each in an economical commercial version and also in a premium military grade. The military types differ from the commercial mainly in that materials are used which meet the usual MIL requirement for moisture, fungus, temperature and corrosion. Also, the turret tube is filled with a solid dielectric in military types other than octal to avoid moisture entrapment.

The rugged construction of the Socket-Turret meets severe vibration tests. Socket-Turrets have been widely used in military applications and although no blanket military approval has been issued, units made of appropriate materials and finishes as described herein have been accepted. Sockets meet the material and performance specifications of MIL-S-12883 All parts will show no serious deterioration after application of a 100-hour salt spray test.

SOCKET-TURRET DESCRIPTION CODE

- (1) HEIGHT IN $\frac{1}{4}$ " UNITS 8 - 0 - 9 - TJG SPECIAL DETAILS (4)
(2) SOCKET TYPE _____ NO. TERMS. ON TURRET (3)
(1). Height measured from chassis to far end of unit in $\frac{1}{4}$ " units. For example, an 8 unit is 2 inches tall.
(2). Socket type is indicated by: "O" for octal; "M" for miniature; "N" for noval; "L" for loctal; "A" for transistor.
(4). Letters indicate material or construction features as follows:

TABLE OF LETTER SPECIFICATIONS

- "T" indicates post turret construction
- "H" indicates hollow open tube turret construction (no through rivet)
- "B" indicates socket held to post turret with through bolt
- "J" for MFE socket casting, beryllium contacts, silver plated, tin dipped
- "P" for 4/40 threaded nuts fastened to saddle (Pem nuts on octals, hex nuts on miniatures)
- "G" for impregnation of phenolic turret for moisture and fungus protection
- "W" for glass silicone material in terminal structure
- "WE" — Epoxy-Glass laminate ins. material
- "Z" tubes are filled with a solid dielectric compound
- "Y" for mycalex socket material (except octal)

NOTE. Where use of the code will not fully describe the unit, specification numbers are issued. Military types are so designated.

Patented

Vector

SOCKET-TURRETS

OCTAL SOCKET-TURRETS

Hollow Terminal Post is set into 1/2" diameter hole in bottom of socket and bonded with special adhesive. Terminals are set in rings of 6 or 3 around the turret post, six being at the remote end and 3 or 6 at the end nearest socket. Other combinations and added rings can be made to order. Sockets are bottom mounted with 4 ground lugs on saddle; mica-filled phenolic castings with wrap-around contacts. Military types employ type TS 101P01 sockets or if tapped bushings are required type TS 101P02. For dimensions of socket portions see Socket Table. For other details see Specification Table on page 3.

ORDERING INFORMATION

CATALOG NUMBERS		TURRET DETAILS				Standard Package Quantity
Commercial Types	Military Types	Height A	Number of Terminals	Number of Rings	Spacing B	
6 - 0 - 6T	680	1 1/2"	6	1	—	30
→ 8 - 0 - 9T	681	2"	9	2	1	25
8 - 0 - 12T	682	2"	12	2	1	25
→ 10 - 0 - 9T	683	2 1/2"	9	2	1 3/8"	20
10 - 0 - 12T	684	2 1/2"	12	2	1 3/8"	20

OCTAL SOCKET DIMENSION TABLE

Socket Type	DIMENSIONS (See Figure)					
	D	E	F	G	H	I
Commercial	.136	.115	1.312	.984	1.562	1-7/32
Military	.156	3/16	1.500	1-7/64	1-13/16	1-9/32

Saddle Nuts: If attached saddle nuts are desired add designations to catalog number as shown on page four of this section.

LOCTAL socket turrets similar to above can be made to special order. Also types with 4, 5, 6, 7, 9 or 11 pin tube type sockets or plugs.

MINIATURE 7 AND 9 PIN SOCKET-TURRETS

Mica-filled sockets for 7 or 9 pin tubes with bottom mounted saddles, carrying four ground lugs attached to 1/2" diameter tubular posts with 1/16" wall materials per specification on page 3. Six terminals at far end of turret post plus 3, 6 or none near socket end. Post attached to socket with rivet in some types, or with long screws in other cases per table. Socket dimensions listed separately below. Order shield bases separately (page 4) if shields are to be used.

7-PIN SOCKET-TURRETS

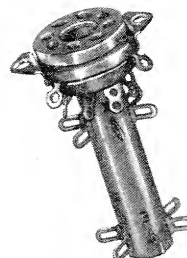
CATALOG NUMBERS		TURRET DETAILS				Standard Package Quantity
Commercial Types	Military Types	Height A	Number of Terminals	Number of Rings	Spacing B	
6 - M - 6T	687	1 1/2"	6	1	—	30
→ 8 - M - 9T	688	2"	9	2	1"	25
8 - M - 12T	689	2"	12	2	1"	25
→ 10 - MB - 12T	690	2 1/2"	12	2	1 3/8"	20

9-PIN SOCKET-TURRETS

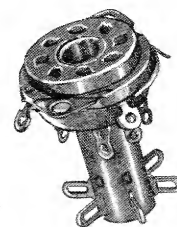
CATALOG NUMBERS		TURRET DETAILS				Standard Package Quantity
Commercial Types	Military Types	Height A	Number of Terminals	Number of Rings	Spacing B	
6 - N - 6T	693	1 1/2"	6	1	—	30
→ 8 - N - 9T	694	2"	9	2	1"	25
8 - N - 12T	695	2"	12	2	1"	25
→ 10 - NB - 12T	696	2 1/2"	12	2	1 3/8"	20

→ Indicates preferred types

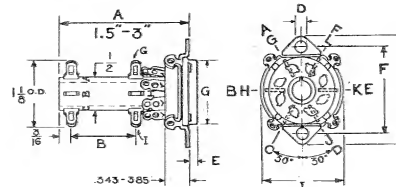
Patented



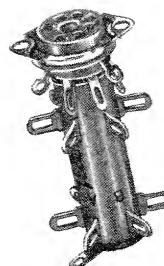
10-0-12T



6-0-6T



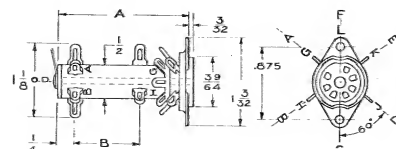
OCTAL TYPE



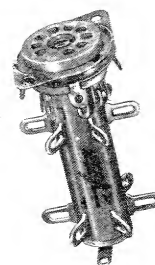
8-M-12T



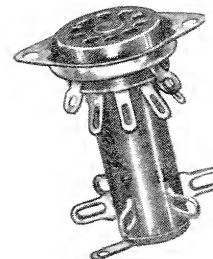
6-M-6T



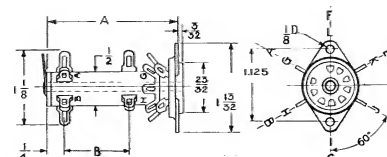
7 PIN MINIATURE TYPE



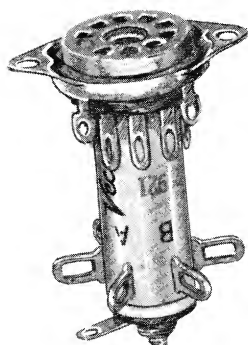
8-N-12T



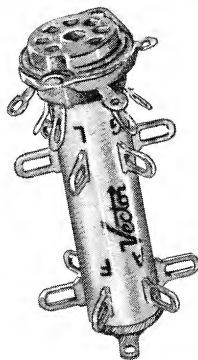
6-N-6T



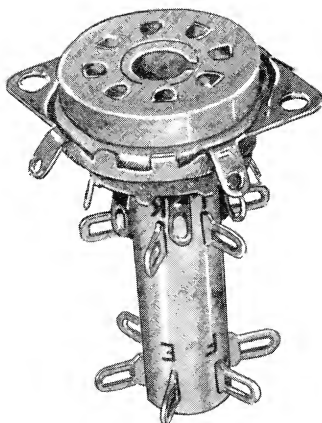
9 PIN MINIATURE TYPE



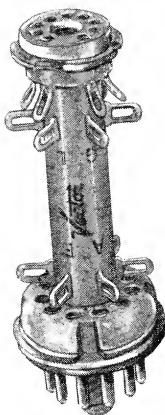
693



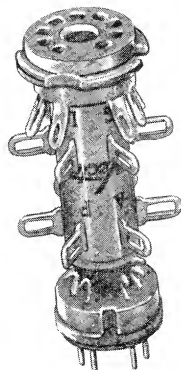
689



682



10-N-12 K1



8-N-12 K1.434

TURRET ATTACHMENT METHODS:

The terminal post is usually riveted to the socket where the height "A" is 2" or less. A long brass rivet extends from the center hole of the socket to the cap washer at the far end of the post. This provides the simplest and most economical fastening method.

For heights "A" greater than 2" long steel screws, #5-40 thread are used instead of rivets with the head in the socket. Ground terminal and nut are at the top end of the post. This provides a somewhat tighter assembly than the rivet and so is used on all military types. A metal washer is also used on the military types at the top of the turret for strength. Indentations on the base of the turret post engage the barriers on the socket and prevent twist.

SPECIAL TYPES OF SOCKET-TURRETS

Many special types of Socket-Turrets and Terminal-Turrets can be readily made to order. These include: (1) Types carrying almost any desired tube socket or tube base plug or both (one at each end). (2) Coil mounting types can be made wherein the turret tube is fastened to the socket by means of an embedded nut at the socket end of the turret leaving the tube open for tuning slugs or other purposes. (3) Stand-off sockets mounted on the end of a phenolic tube for high voltage applications have been made in considerable numbers and can be supplied for many types of sockets.

SOLID DIELECTRIC FILLING OF TURRET TUBES

Hollow turret tubes may, under some circumstances, trap moisture with resulting deterioration of insulation. For this reason the military type turrets (except octal) are filled with a solid dielectric material which prevents moisture accumulation. Dow-Corning silicone compound No. DC-11 has been generally used for this purpose. However, the manufacturer reserves the right to use instead a fully equivalent epoxy potting compound which in some units is to be preferred because it sets up solid. Both materials have a low dielectric constant (appxly. 4) and a high insulation resistance over a wide range of temperature variation. Should this treatment be desired on the commercial types the letter 'Z' should be added to the catalog number.

SOCKET AND TERMINAL TURRET SPECIFICATIONS

ITEM	COMMERCIAL TYPE	MILITARY TYPE
Socket (Bottom Mounting)	Meets EIA socket dimensional standards	Meets material and performance Specs. of MIL-S-12883
Socket casting	Mica filled Phenolic, grade MFE	Same Per Mil Spec. P-14D
Socket contacts	Brass, Cadmium plated	Beryllium copper, silver plated .0002" Tabs: Hot tin dipped
Socket saddle	Steel, Hot tin dipped with 4 ground lugs	Brass, flash nickel plating with 4 ground lugs. Hot tin dipped
Turret Terminals	Brass, Fused tin plating	Same
Turret Post	Phenolic, Grade XXXP	Glass silicone, Grade G7-2 per Mil P-997B
Ground Terminal	Brass, Hot tin dipped or fused tin plating	Same
Metallic washers	None	Brass, fused tin plating
Insulating washers	Phenolic, Grade XXP	Glass silicone, Grade GB-112-S per Mil P. 997B or glass melamine, Grade GB-28M
Lockwasher	Steel, External tooth cadmium plated	None
Center nut	#5-40 Steel, cadmium plated	#5-40 Elastic Stop Nut, Steel, Cadmium plated, lridited to ANQQP416. Type II. Class C.
Center screw	#5-40 Steel, cadmium plated	Same to ANQQP416. Type II. Class C.
Filling Material for Inside Turret Post	None (Unless requested)	Dow-Corning Silicone Compound, D.C. 11 or Epoxy Potting Compound
The following applies to Terminal Turrets only:		
Center screw	#6-32, Cad. plate	Same to ANQQP416. Type II. Class C.
Center nut	#6-32, Cad. plate	Same to ANQQP416. Type II. Class C.
Metal cap washer	Brass, fused tin plate	Same
Nut washer	Brass, fused tin plate	Same

Vector

SHIELD BASES:

Mount above chassis concentric with socket. Hold JAN type shields.

CATALOG NUMBERS		For Socket	Material	Finish	Std. Pkgs.
Commercial	Military				
S7	—	7 pin	Steel	Cadmium plated	50 & 100
S7.17	—	7 pin	Steel	Cad. Pl., Iridited	50 & 100
—	S7.22	7 pin	Brass	Nickle plated	50 & 100
S9	—	9 pin	Steel	Cadmium plated	50 & 100
S9.17	—	9 pin	Steel	Cad. Pl., Iridited	50 & 100
—	S9.22	9 pin	Brass	Nickle plated	50 & 100

SOCKET SADDLE NUTS

U-NUTS. Vector 4/40-U and 4ZU Nuts are stamped from sheet steel folded over to form a "U" with helical screw depression. The "U" Nut is slipped over the ends of the saddle so that the hole in the "U" Nut coincides with the saddle mounting hole. The 4ZU Nut fits a No. 4Z sheet metal screw while the 4/40-U fits the usual 4/40 threaded screw. Due to the coarser thread of the sheet metal screw heavier metal is used for the 4ZU Nut than for the 4/40-U Nut giving greater strength, and therefore a preference for this type. Hardened screws are listed for these nuts since there is a tendency to strip the screw thread if excess torque is applied. Standard finish on both types is cadmium plated iridited.

Catalog No.	Description	Thread	Std. Pkgs.
4/40-U	U-Nut (loose)	4/40	50 & 1000
4Z-U	U-Nut (loose)	4Z	50 & 1000
S4/.250	Binder Hd. Screw	4/40 x 1/4"	50 & 1000
S4Z/.250	Binder Hd. Screw	4/24 x 1/4"	50 & 1000

ATTACHED NUTS are usually preferred over U-nuts by military users. For small octal sockets No. 4/40 Pem nuts are swaged on and for the larger military octal socket No. 6/32 Pem nuts are used. For miniature and noval sockets Hex nuts are soldered to saddles.

Add code letters to socket numbers for nuts as follows:

Code Letter (Add to Socket Number)		For Socket	Description
Commercial	Military		
P	—	Octal	4/40 Pem Nut; Steel, Cad. Pl.
—	P	Octal	6/32 Pem Nut; Non Ferrous Alloy lead-tin Pl.
P	—	7 & 9 Pin Min.	4/40 Brass Hex Nuts, Cad. Pl.
—	PC	7 & 9 Pin Min.	4/40 Locknut; 60-40 Lead-Tin Pl.
4/40-U	—	All Types	4/40-U Steel U-Nut, Cad. Pl., Iridite
4Z-U	—		4Z-U Steel U-Nut, Cad. Pl., Iridite for Sheet Metal Screw

TERMINAL-TURRETS

The tubular terminal structure used with Vector Socket-Turrets provides a rugged and compact mounting when used without the socket. Requires a single chassis hole (0.150" dia.) for mounting and a minimum of "floor space," yet will carry six or more resistors and capacitors in convenient arrangement. Uses 6-32 long steel center screw with small pattern No. 6 hex nuts. Brass nut washer with 3 ground lugs at base provides tight assembly with protruding screw for mounting. Brass washer at top also has three ground lugs.

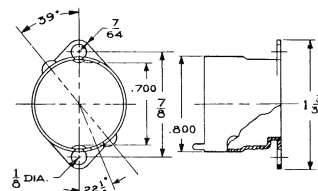
Military types have solid dielectric filling inside of post. (Sec spec.) Terminal turret specifications listed in table on page 3.

ORDERING INFORMATION

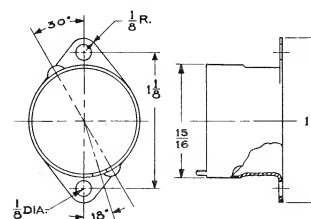
CATALOG NUMBERS								Quantity Standard Package
Commercial Types	Military Types	Number of Terminals	No. of Rings	Height A	B	D	E	
6-12	676	12	2	1-11/32"	5/8"	7/16	9/32	45
8-12	677	12	2	1-27/32"	1"	9/16	9/32	35
10-12	678	12	2	2-11/32"	1-3/8"	11/16	9/32	30

NOTE: Tolerance on dimensions $\pm 1/16"$

Longer or shorter types and other terminal configurations can be readily made to order.



S7 TYPE SHIELD BASE



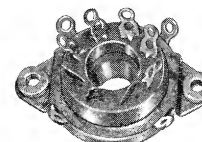
S9 TYPE SHIELD BASE



440-U NUTS



LOCK-NUTS

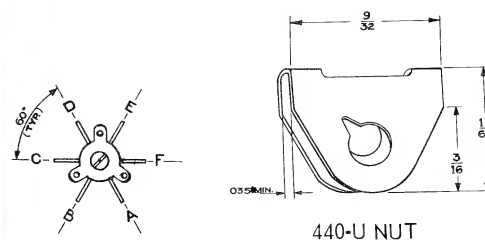


PEM NUTS

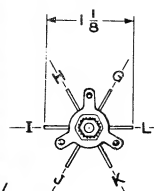
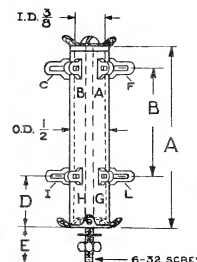


HEX NUTS

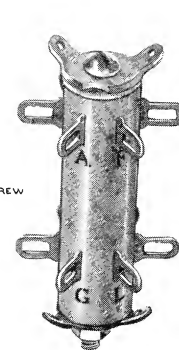
SOCKETS AND NUTS



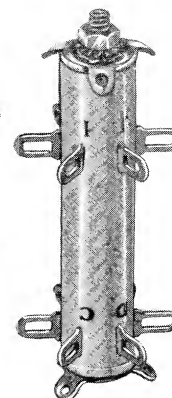
440-U NUT



TERMINAL TURRET
(BOLTED)

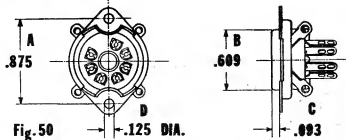


6-12

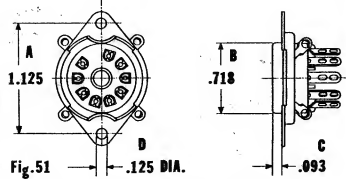


10-12

TURRETS



7-PIN MIN. SOCKET



9-PIN NOV. SOCKET

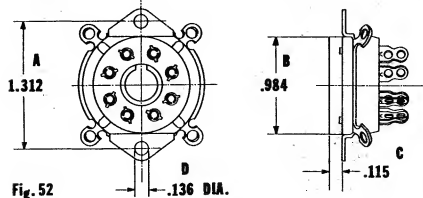
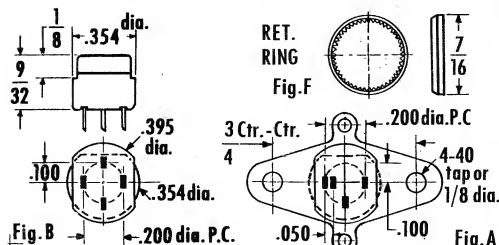
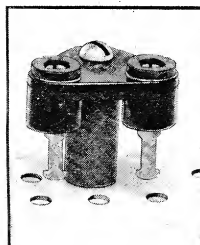


Fig. 52

8-PIN OCTAL SOCKET



RA 9



POWER RA2
TRANSISTOR
SOCKET

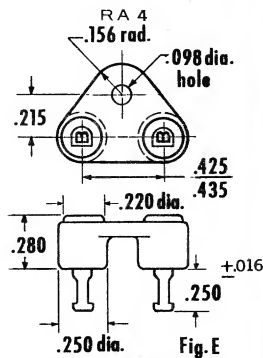
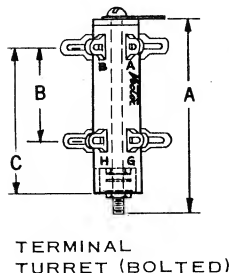
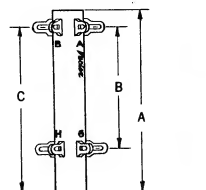


Fig. E



TERMINAL
TURRET (BOLTED)



TERMINAL
TURRET (HOLLOW)

TUBE SOCKETS

The following tube sockets which are similar to those used on TURRET units may be ordered separately. Miniature types, per Fig. 50, and Noval types, per Fig. 51, have 1/8" diameter center holes to pass 1/8" rivets or #5 screws. They have no center shields and may be obtained with or without saddles and with or without counterbore to recess a through screw. Castings are mica filled phenolic, terminals cadmium plated brass or to "J" spec. defined below. Saddles cadmium plated or hot-tin dipped steel or brass per Section XIV, Page 3, Octal types per Fig. 52 are available.

CAT. NO.	TYPE	CTR. BORE (Note 5)	CAT. NO.	TYPE	CTR. BORE (Note 5)
R7	7-Pin Min.	No	R91	9-Pin Min.	Yes
R71	7-Pin Min.	Yes	R8	8-Pin Octal	No
R9	9-Pin Min.	No	R8.5	8-Oct. Note (3)	No
			R8.6	8-Oct. Note (4)	No

NOTES:

- (1) Add "J" for beryllium copper contacts, silver-plated and hot tin dipped.
- (2) Add 2 for socket without saddle.
- (3) Has "A" = 1-1/2" "B" = 1.11", "C" = 0.10", "D" = 5/32"
- (4) Military Type TS101P01 - Dim's as note 3 except "C" = 0.20"
- (5) Has .187" diameter counter-bore in center to receive through screw for turret applications.

TRANSISTOR SOCKETS

Small transistor sockets have mica-filled phenolic (MFE) bodies and beryllium copper contacts, silver plated plus gold flash. Two types of hole configurations are offered: (1) Combination type for 3 leads on 0.2" diameter circle or 3 leads in line, Fig. A; (2) for 4 leads on same circle, Fig. B. The first type is most useful for experimental work. (Also supplied with pig-tail leads per Section IX, Page 6).

Mounting Methods: May be mounted standoff style directly on printed circuits or on Vector "G" pattern PLUGBOARD by inserting tabs directly into holes, or by first installing eyelets in holes and soldering or crimping tabs to eyelets.

Or if hole is drilled or punched in board a retainer ring can be pressed on to hold socket in place. The above sockets will also be supplied with a mounting saddle carrying ground lugs if so desired. This is a larger than usual saddle and carries 1/8" diameter holes spaced .750 (or 4/40 tapped holes to special order).

A socket for power transistors is also listed below and in Fig. E. The body is black bakelite, grade CFG Contacts are Phosphor Bronze - Cad. plated.

CAT. NO.	CONTACTS	FIG.	SADDLE*	BODY
RA4	4	A	NO	RD.
RA4.1	4	A	YES	RD.
RA9	4	B	NO	RD.
RA9.1	4	B	YES	RD.
RA2	2	E	NO	TRIANGLE
0712-01-01	-	F	RET. RING FOR RD. SKTS.	

*If 4/40 tapped hole in extruded portion of saddle is desired add "P" to number. Order retainer ring separately if desired for round sockets.

The round transistor socket will carry 1 amp with 1200 volts between contacts (at sea level). The contact resistance is less than 0.03 ohm and insulation resistance is 1000 megohms minimum.

TERMINAL TURRETS

Additional types, somewhat different than those on page 4 are presented. Some are longer, others hollow for coil forms or where open construction is desired. Additional types can be made.

BOLTED TERMINAL TURRETS

These are similar to the terminal turrets shown on page 4 except that the metal washers at top and bottom are eliminated.

CAT. NO.	HEIGHT 'A'	NO. OF TERMINALS	NO. OF RINGS	SPACING	
				'B' DIM.	'C' DIM.
4-6-C *	1.0"	6	1	0.56"
6-12-C *	1.5"	12	2	0.62"	1.05"
8-12-C	2.0"	12	2	1.00"	1.56"
10-12-C	2.5"	12	2	1-3/8"	2.06"
12-12-C	3.0"	12	2	1.87"	2.56"

HOLLOW TUBE TERMINAL TURRETS

These have a 6/32 knurled nut pressed into one end of the turret for mounting.

6H-6 *	1.5"	6	1	1.3"
6H-12	1.5"	12	2	7/8"	1.3"
8H-6 *	2.0"	6	1	1.8"
8H-12	2.0"	12	2	1-3/8"	1.8"
10H-6 *	2.5"	6	1	2.3"
10H-12 *	2.5"	12	2	1.87"	2.3"

NOTE: Additional types with more terminals can be supplied similar to those on page 6

* Not stock item, special order only

Vector

NOVAR AND COMPACTRON SOCKET TURRETS

These have terminal turret post bonded to socket as with octal types per page 2. The Novar has 9 contacts for 0.040" pins on 0.687" diameter circle while the Compactron has 12 similar contacts on 0.75" diameter circle. Sockets are Mica-filled phenolic, Grade MFE, contacts are brass, cad. plated; saddles are steel, cad. plated. See figure for dimensions.

12 PIN		9 PIN		TURRET TERMINALS		
CAT. NO.	HEIGHT 'A'	CAT. NO.	HEIGHT 'A'	NO. OF TERMINALS	NO. OF RINGS	'B' DIM. FIG.
6-C-6	1-3/8"	6-V-6	1 1/2"	6	1	---
8-C-12	1-7/8"	8-V-12	2"	12	2	1"
10-C-12	2-3/8"	10-V-12	2 1/2"	12	2	1-3/8"

★ Not stock item, special order only.

ADDITIONAL BOLT TYPE SOCKET-TURRETS

(See Page 4 for preferable type)

The bolt type assembly consists of a #5-40 screw extending from end to end of the unit with a lock washer and nut at the turret end (or lock-nut if ordered). Approximately 1/8" of thread extends beyond the nut so that if desired the unit may be mounted on the chassis from the turret end instead of the socket end. (This is especially useful in experimental work since the assembly can be conveniently mounted with only a 1/8" hole needed) U-nuts for #4-40 screws can be ordered for mounting the saddle to the chassis. (See bottom of page 4). Socket mounting dimensions and general specifications are the same as for corresponding types on page 3. Bold face type indicates most popular units.

Catalog Numbers			Turret Terminals			
7 Pin	9 Pin	Height "A"	No. Term.	No. Rings	"B" Dim. Fig. 1	"C" Dim. Figs. 4 & 5
10MB-12 T	10NB-12 T	2.5"	12	2	1.375"	---
★10MB-18 T	★10NB-18 T	2.5"	18	3	0.687"	0.687"
★10MB-24 T	★10NB-24 T	2.5"	24	4	1.0"	0.375"
★12MB-12 T	★12NB-12 T	3.0"	12	2	1.875"	---
★12MB-18 T	★12NB-18 T	3.0"	18	3	1.0"	1.0"

NOTE: In line terminal rows have standard spacing of 1 inch, 1.375" and 1.875". Standard spacing between adjacent staggered rows is 0.375 inches.

To prevent moisture entrapment in the turret tube, a solid filling dielectric can be added to order.

HOLLOW TUBE SOCKET TURRETS

In this type a knurled nut is pressed into the socket end of the turret tube and is bonded with an adhesive. A short screw through the center of the socket holds the assembly together. Indentations on the base of the turret engage the socket and prevent twist. Hollow tube types prevent moisture from becoming entrapped

Socket mounting dimensions and general specifications are the same as for corresponding types on page 2. Bold face type indicates most popular units.

Catalog Numbers			Height "A"	Turret Terminals		
7 Pin	8 Pin Octal	9 Pin		No. Term.	No. Rings	"B" Dim. Fig. 2
★4MH-6	★4-O-6 T	★4NH-6	1"	6	1	---
★6MH-6	6-O-6 T	★6NH-6	1.5"	6	1	---
★6MH-12	---	★6NH-12	1.5"	12	2	0.50"
★8MH-9	8-O-9 T	★8NH-9	2.0"	9	2	1.0"
8MH-12	8-O-12T	8NH-12	2.0"	12	2	1.0"
★10MH-12	10-O-12T	★10NH-12	2.5"	12	2	1.375"
★6-MH	★6-O	★6NH	1.5"	0	---	---
★8-MH	★8-O	★8NH	2.0"	0	---	---
★8MH-6	★8O-6	★8NH-6	2.0"	6	1	1-1/16"
★10MH-6	★10O-6	★10NH-6	2.5"	6	1	1-19/32"

Note: Turrets with additional Terminal configurations can be supplied.

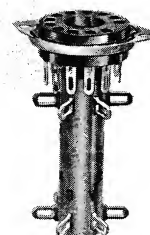
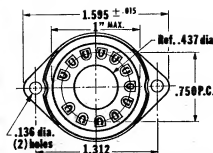
★ Not stock item, special order only.

* This type for winding coils around periphery.

For applications where a threaded insert is needed to hold tuning slugs in the 3/8" I.D. of the turret tubes as used in the hollow tube socket turrets or terminal turrets, Knurled nuts may be ordered separately as follows:

#4-40 K	#5-40 K	#6-32 K	#8-32 K	Aluminum 1/4" long
---------	---------	---------	---------	--------------------

Thread type is indicated by first three digits of No.



COMPACTRON
10-C-12



12-NB-12

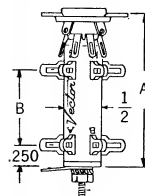


FIG. 1
BOLTED TYPE

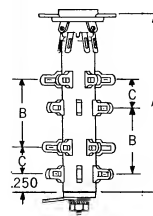
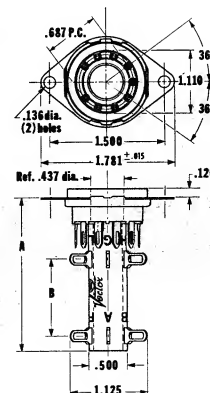


FIG. 4
24 TERMINAL TYPE



NOVAR
8-V-12



6-MB-6



8-MH-9

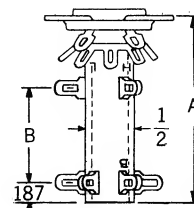


FIG. 2
HOLLOW TYPE

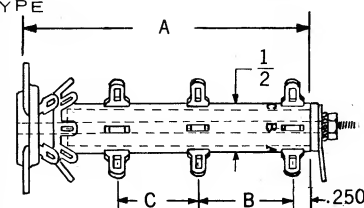
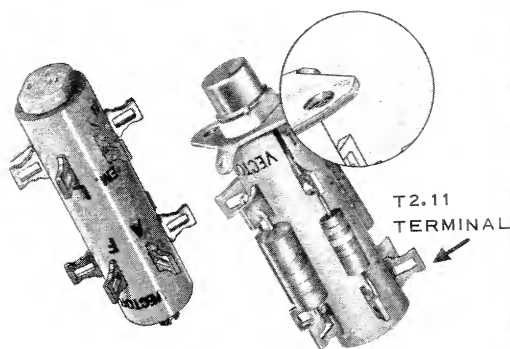


FIG. 5
18 TERMINAL TYPE

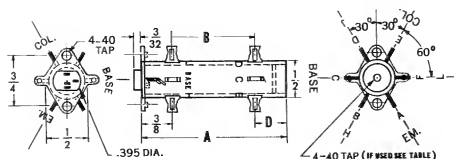
PATENTED

TRANSISTOR SOCKET TURRETS



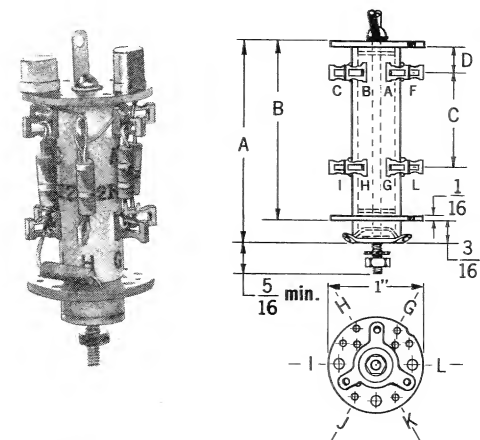
7-A-12 T-440

8-A-12T
(Transistor not supplied)



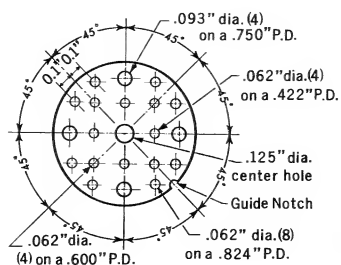
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TRANSISTOR WAFER TURRETS



#654
(Supplied without wiring)

#650 SERIES



Detail Drawing of TOP and BOTTOM-WAFER

TRANSISTOR SOCKET TURRETS

The convenience and compactness of the Turret Socket is now available for transistors. Dual purpose transistor socket is mounted in one end of a turret post so that the socket terminal tabs extend out to three of the six terminals on one ring. A second ring of six terminals is located at the opposite end of the terminal post. Thus components may be quickly and neatly connected between the two rings of terminals and the transistor socket tabs may be soldered to adjacent turret terminals.

Transistor socket turrets are furnished with either mounting saddles or recessed knurl nuts. Knurl nut mount units may be quickly bolted to the chassis with a #4-40 screw through the chassis into the 4-40 knurl nut which is imbedded in end of the turrets. If it is desired to make the unit "pluggable" a VECTOR 7, 8 or 9 pin standard tube base plug may be readily supplied on the bottom. Round or square shield cans can also be supplied. (See Section V, pages 1 & 2)

<u>Cat. No.</u>	<u>Dim. A</u>	<u>Dim. B</u>	<u>Dim. D</u>	<u>Saddle</u>	<u>Knurl Nut</u>	<u>Std. Pkg. Qty.</u>
5-A-12 T	1-1/4"	5/8"	7/32"	Yes	None	12
6-A-12 T	1-1/2"	7/8"	7/32"	Yes	None	12
8-A-12 T	2"	1-3/8"	7/32"	Yes	None	12
6-A-12 T-440	1-1/2"	5/8"	15/32"	None	Yes	12
7-A-12 T-440	1-3/4"	7/8"	15/32"	None	Yes	12
9-A-12 T-440	2-1/4"	1-3/8"	15/32"	None	Yes	12

TRANSISTOR WAFER TURRET MOUNTS UP TO FOUR TRANSISTORS

Transistor Wafer Turrets provide mountings for up to four transistors plus other required circuit components all on one small compact unit. The 1" wafers provided on top and bottom are punched to receive transistor leads in either the JEDEC triangular pattern, or the "three-in-line" configuration. After the transistor leads have been passed through the wafer holes and soldered to the terminals on the turret post, transistors are anchored firmly in place.

VECTOR tube base plugs (Section V) can be mounted to these turrets, and round or square cans can also be supplied. See Section V, pages 1 & 2.

Comm. Style	Military Style	Dimensions				Std. Pkg. Qty.	
Cat. No.	Cat. No.	A	B	C	D	Comm.	Mil.
650	651	1-1/2"	1.31"	5/8"	3/16"	30	1
652	653	2"	1.81"	1"	1/4"	25	1
654	655	2-1/2"	2.31"	1-3/8"	1/4"	20	1

TRANSISTOR SOCKET AND WAFER TURRET SPECIFICATIONS

ITEM	COMMERCIAL TYPE	MILITARY TYPE
Socket Contacts	Beryllium Copper, Silver plated, gold flash	Beryllium Copper, Silver plated, gold flash
Socket Saddle	Brass, Cadmium plated	Brass, Cadmium plated
Turret Terminals	Brass, Fused tin plating	Brass, Fused tin plating
Turret Post	Phenolic, Grade XXXP	Glass silicone, G7-2 per Mil P-997 B
Ground Terminal	Brass, Hot tin dipped or fused tin plating	Brass, Hot tin dipped or fused tin plating
Insulating Washers	Phenolic, Grade XXP	Glass silicone, Grade GB-112-S per Mil-997B or glass melamine, Grade GB-28M
Wafer	Epoxy-Paper 1/16" thk. per Mil P-22324 Type PEE	Glass silicone, 1/16" thk. Grade G7 per Mil P997B
Lock Washer	Steel, External tooth Cad. plated	None
Nut	# 5-40 Steel, cadmium plated	# 5-40 Elastic Stop Nut, Cadmium plated, Iridite to AN-QQ-P416. Type II. Class C.
Knurl Nut	Aluminum	
Center Screw	# 5-40 Steel, Cadmium plated	# 5-40 Steel, Cadmium Pltd. Iridite to AN-QQ-P416. Type II. Class C.
Inside Washer	XXXP Phenolic	Melamine-Glass, Grade GB-28M
Nut Washer	Brass, fused tin finish	Brass, fused tin finish
Filling Material for inside Turret Post	None (Unless requested)	Dow-Corning Silicone Compound D.C. or Epoxy-Potting Compound

TUBES

Vector

DECK TURRET SPECIFICATIONS

DECK TURRETS consist of rectangular terminal strips supported on tubular spacers with long screws passing from deck to deck and also holding sockets, plugs, or both, providing a unified ready-to-wire assembly. Spacers are phenolic in standard applications, or anodized aluminum to order. Length of spacers may be readily changed to vary the distance between decks. Two decks are adequate for most applications but more may be added to order. Sockets are mounted to the decks by means of posts and screws, and may be oriented as required. Socket Saddles carry 440-U nuts to facilitate mounting the assembly to the chassis. Typical DECK TURRETS are shown in Figs. 8 through 13. For standard size DECK TURRETS, employed with miniature and octal tube sockets, GENERAL PURPOSE Pattern "A" punch-board .06-.09 thk. is used. Strips are three holes wide and the standard spacing for 7 and 9 pin miniature sockets is 1-1/16". Where octal sockets are used, socket spacing is 1-21/64". Smaller pattern decks for transistor circuitry are listed separately later.

STANDARD DECK TYPES

CATALOG NUMBERS		No. of Sockets	Height (Max.) "A"	Strip Dimensions "D"		No. of Holes per Deck	No. Terms. per Deck	Spacing of Decks "B"
U-LET TYPE	ZIP TYPE			"C"	"D"			
6-N-3A3-1	6-N-3A3Z-1	1	1.5"	0.84"	0.84"	3x3	8	1 Deck
8-N-3A3-2	8-N-3A3Z-2	1	2.0"	0.84"	0.84"	3x3	8	1 5/16"
10-N-3A3-2	10-N-3A3Z-2	1	2.5"	0.84"	0.84"	3x3	8	1 7/16"
8-NN-7A3-2	8-NN-7A3Z-2	2	2.0"	1.86"	0.84"	7x3	14	1 5/16"
10-NN-7A3-2	10-NN-7A3Z-2	2	2.5"	1.86"	0.84"	7x3	14	1 7/16"
8-3N-11A3-2	8-3N-11A3Z-2	3	2.0"	2.92"	0.84"	11x3	22	1 5/16"
10-3N-11A3-2	10-3N-11A3Z-2	3	2.5"	2.92"	0.84"	11x3	22	1 7/16"
14-3N-11A3-3	14-3N-11A3Z-3	3	3.5"	2.92"	0.84"	11x3	22	1 3/16"
8-4N-15A3-2	8-4N-15A3Z-2	4	2.0"	3.98"	0.84"	15x3	30	1 5/16"
10-4N-15A3-2	10-4N-15A3Z-2	4	2.5"	3.98"	0.84"	15x3	30	1 7/16"
8-5N-19A3-2	8-5N-19A3Z-2	5	2.0"	3.98"	0.84"	19x3	38	1 5/16"
10-5N-19A3-2	10-5N-19A3Z-2	5	2.5"	3.98"	0.84"	19x3	38	1 7/16"

Note 1: Socket spacing 1 1/16". 9 pin noval sockets shown above; for 7 pin miniature socket substitute "M" for "N". If octal socket is desired substitute "O"; however, with octals overall height will increase by approximately 1/8". Combinations of miniature and noval sockets may be obtained such as "MNN" etc. Slight additional charge made for combinations for quantity orders less than 25. Other overall heights, 3", 3 1/2", 4" to order. Extra decks to order. Tolerance on strip dimensions ± .04" or 3%.

The material used is as shown on page 1 of this section under commercial types. Military type material can be supplied to order.

TERMINALS: U-LET TYPE UNITS carry U-shaped eyelets called "U-LETS", for the deck nearest the socket; and fork-like post terminals, called "FORKLETS" for the deck at the far end of the stack. Other arrangements will be made to order. U-LETS, as shown in Fig. 15 are similar to eyelets except that they are open out to the edge of the insulating strip to permit side entry of the lead wire. This obviates the necessity of threading the wire through a hole. FORKLETS, shown in Fig. 16, have a slot almost all the way down the center of the body to permit wires to be laid in easily. Wires may also be pushed up through the center hole. To install a resistor, for example, in a DECK TURRET, one lead is usually pushed through the center hole of the FORKLET and bent over while the other lead is laid in the U-LET, running also, if necessary, to the socket tab or another terminal. When ordered, conventional turned terminals of various designs will be furnished. See section on TERMINALS.

ZIP TYPE side projecting Terminals as shown in figure 11 are installed on both decks of types listed in second column above.

OTHER TYPES

DECK TURRETS can be mounted at right angles to the usual position where desired by the addition of angle brackets supplied to order (ANGLE BRACKET MOUNTING), or they may be supported at the end away from the socket by the addition of threaded metal spacers also available on order (REVERSE MOUNTING).

WAFFER SOCKET - TURRETS

These consist of a round 3/4" dia. epoxy-glass wafer 1/16" thick attached by means of a metal post to a miniature (7-pin) or noval (9-pin) socket and with 7 turned terminals attached as shown in the fig. 10. Socket contacts are beryllium copper, silver plated.

CAT. NO.	SOCKET	DIMENSIONS		NO. OF TERMINALS	NO. OF RINGS	STD. PKG. QUANTITY
		"A"	"B"			
6-M-7J-1	7-pin Min.	7/8"	1-3/32"	7	1	30
6-N-7J-1	9-pin Nov.	1-1/8"	1-13/32"	7	1	30

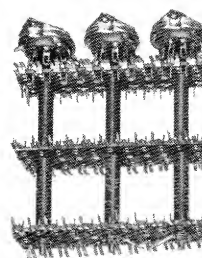


FIG. 13
3 DECK TURRET
14-3N-11A3Z-3

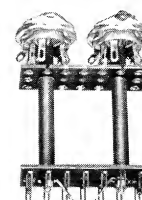


FIG. 8
2 DECK TURRET
10-NN-7A3-2

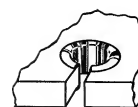


FIG. 15
U-LET

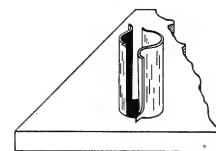


FIG. 16
FORKLET



6-N-3A3-2

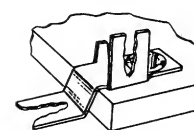


FIG. 11
ZIP TERMINAL

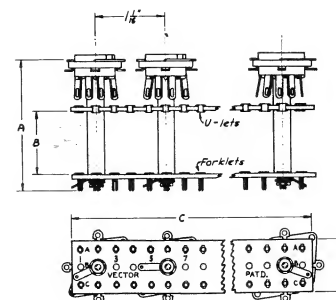


FIG. 14
DIMENSIONS-DECK TURRET

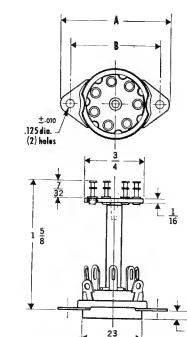
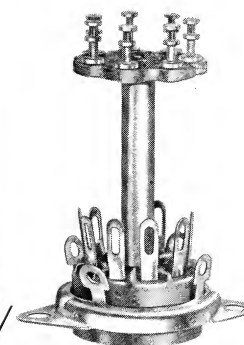


FIG. 10 WAFFER SOCKET-TURRETS



SUPPLEMENT
EFFECTIVE JUNE 30, 1965 TO:

GENERAL PRICE LIST
EFFECTIVE MAY 1, 1965

Page 1-12
Iss. 65-5

DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory	DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory
ADDITIONS				REVISIONS			
Screw	0111-211-14/.875	50	.90/Pkg Any Quantity	Wafer	515	1	1- 500- 1000- 499 999 4999
Screw	0111-221-01/.250	50	.60/Pkg Any Quantity	Wafer	516	1	.20 .15 .12
Screw	0111-221-07/.750	50	.90/Pkg Any Quantity	Wafer	520	1	.18 .14 .11
Screw	0111-424-09/.313	50	.60/pkg Any Quantity	Wafer	R71	1	.17 .13 .10
Screw	0111-424-30/.750	50	.60/Pkg Any Quantity	Socket	P96	1	.17 .13 .10
Washer	0311-91-19	25	.45/Pkg Any Quantity	Tool		1	15.75 Any Quantity
Retainer	*0910-10-Pkg X	10	.50 Any Quantity				1- 20- 100- 200- 19 99 199 999
			1- 20- 100- 200- 19 99 199 999	Terminal	T30N-2-Pkg X	10	.95 .86 .80 .64
Microbord	169P59/032C1	1	6.61 5.95 5.55 4.43	Terminal	T30N-2-Pkg C	100	6.95 6.25 5.85 4.65
Vectorbord	170H48W	1	7.70 6.93 6.47 5.16				1 5 10 25 4 9 24 99
Vectorbord	170H48WE/032	1	3.57 3.21 3.00 2.39	Terminal	T30N-2-Pkg M	1000	48.50 43.65 40.74 38.70
Microbord	336M76/032C1	1	9.69 8.72 8.14 6.49				
Plugbord	*2815WE	1	3.23 2.91 2.71 2.16				
			1- 500- 1000- 499 999 4999	Case	*HF20-31-46/21	}	FOR PRICES CONTACT FACTORY
Case	*MC3061-7	1	.07 .05 .04	Case	*HF20-31-46/23		
Tool	P131	1	1.75 Any Quantity	Case	*HF20-46-66/21		
Tool	P132	1	1.75 Any Quantity	Case	*HF20-46-66/23		
Tool	P133	1	1.75 Any Quantity	Case	*HF16-31-46/21		
Tool	P134	1	1.75 Any Quantity	Case	*HF16-31-46/22		
			1- 500- 1000- 499 999 4999	Case	*HF16-46-66/21		
Socket	R72	1	.09 .07 .05	Case	*HF16-46-66/22		
Socket	R92	1	.14 .11 .08				
Socket	RA4.5	1	.25 .19 .15				
			1- 50- 200- 500- 49 199 499 999	DELETIONS			
Socket	RA4.51	1	.39 .35 .27 .26	Vectorbord	170H48WE	1	1- 20- 100- 200- 19 99 199 999 4.07 3.66 3.42 2.73
			1- 20- 100- 200- 19 99 199 999	Terminal	T30N-Pkg. X	10	1.15 1.04 .97 .77
Terminal	T30-2-Pkg X	10	.99 .89 .83 .66	Terminal	T30N-Pkg. C	100	8.45 7.61 7.10 5.66
Terminal	T30-2-Pkg C	100	7.40 6.66 6.22 4.96				1- 5- 10- 25- 4- 9- 24- 99
			1 5 10 25 4 9 24 99	Terminal	T30N-Pkg. M	1000	58.90 53.01 49.48 47.12
Terminal	T30-2-Pkg M	1000	52.86 47.57 44.40 42.18				1- 20- 100- 200- 19 99 199 999
			1- 20- 100- 200- 19 99 199 999	Terminal	T30DN-Pkg. X	10	1.20 1.08 1.01 .80
Terminal	T31A- Pkg X	10	1.30 1.17 1.09 .87	Terminal	T30DN-Pkg. C	100	8.95 8.06 7.52 6.00
Terminal	T31A-Pkg C	100	9.45 8.51 7.94 6.33				1- 5- 10- 25- 4 9 24 99
			1- 5- 25- 50- 4 24 49 99	Terminal	T30DN-Pkg. M	1000	63.93 57.54 53.70 51.14
Terminal	T31A- Pkg M	1000	65.86 59.27 55.32 52.55				1- 20- 100- 200- 19 99 199 999
			1- 20- 100- 200- 19 99 199 999	Terminal	T30-Pkg. X	10	1.20 1.08 1.01 .80
Terminal	T32A- Pkg X	10	1.30 1.17 1.09 .87	Terminal	T30-Pkg. C	100	8.95 8.06 7.52 6.00
Terminal	T32A-Pkg C	100	9.45 8.51 7.94 6.33				1- 5- 25- 50- 4 24 49 99
			1- 5- 25- 50- 4 24 49 99	Terminal	T30-Pkg. M	1000	63.93 57.54 53.70 51.14
Terminal	T32A- Pkg M	1000	65.86 59.27 55.32 52.55				
Spring	T64-Pkg L	50	.40 Any Quantity				



DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory	DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory
Prongs	† 0022-11/1-Pkg. 15	15	.98 Any Quantity	Socket Turr.	6-C-6	1	1- 50 200 500- 49 199 499 999
Prongs	† 0022-11/1-Pkg. C	100	5.85 Any Quantity	Plug-in	* 6-E1K3	1	.73 .66 .51 .49
Prongs	† 0022-11/1-Bulk		48.00/M Any Quantity	Term. Turr.	6-H-6	1	7.87 7.08 5.51 5.27
Cap	* 0077-01/15-Pkg. X	10	1.05 Any Quantity	Term. Turr.	6-H-12	1	.40 .36 .28 .27
Pin	* 0077-50/4	1	.14 Any Quantity	Plug-in	* 6-HK3	1	.45 .41 .32 .30
			1- 500- 1000- 499 999 4999	Socket Turr.	6-M-6T	1	7.54 6.79 5.28 5.05
Box	0079-02/5	1	.36 .27 .22	Wafer Turr.	† 6-M-7J-1	1	.63 .57 .44 .42
Box	0079-02/11	1	.22 .17 .13	Socket Turr.	† 6-MH	1	1.19 1.07 .83 .80
Screw	0111-221-01/.250	100	.96 Any Quantity	Socket Turr.	† 6-MH-6	1	.54 .49 .38 .36
Screw	0111-221-07/.750	100	1.76 Any Quantity	Socket Turr.	† 6-MH-12	1	.63 .57 .44 .42
Screw	0111-424-09/.313	100	.96 Any Quantity	Socket Turr.	† 6-MH-12	1	.69 .62 .48 .46
			1000 5000 10,000	Socket Turr.	6-N-6T	1	.63 .57 .44 .42
Screw	0111-424-29/5	100	.97 Any Quantity	Wafer Turr.	† 6-N-7J-1	1	1.19 1.07 .83 .80
Screw	0111-424-30/.750	100	1.06 Any Quantity	Socket Turr.	† 6-NH	1	.54 .49 .38 .36
Screw	0111-442-05/.25	50	.60 Any Quantity	Socket Turr.	† 6-NH-6	1	.63 .57 .44 .42
			1000 5000 10,000	Socket Turr.	† 6-NH-12	1	.69 .62 .48 .46
Screw	0111-442-05/.25 Bulk	Bulk	4.83/M 4.35/M 4.06/M	Socket Turr.	6-O-6T	1	.59 .53 .41 .40
Screw	0111-451-07/.25	50	.60 Any Quantity	Socket Turr.	7-A-12T-440	1	1.04 .94 .73 .70
Screw	0111-451-07/.25 Bulk	Bulk	6.59/M 1000 pcs. 5.93/M 5000 pcs. 5.54/M 10,000 pcs. 4.42/M 25,000 pcs.				1- 20- 100- 200- 19 99 199 999
Nut	0251-210-01	100	.94 Any Quantity	Vectorbord	7AA5EP	1	.18 .16 .15 .12
Pins	0311-91-19-Pkg. C	100	.96 Any Quantity	Nut	8/32-K-Pkg. C	100	4.94 Any Quantity
Sleeving	* 0677/12-Pkg. C	100	7.50 Any Quantity				1- 50- 200- 500- 49 199 499 999
			1000-4999 5000 & over	Term. Turr.	8-12	1	.53 .48 .37 .36
Sleeving	* 0677/12-Bulk		56.78/M 48.28/M	Term. Turr.	8-12-C	1	.59 .53 .41 .40
			1-999 1000 & over	Socket Turr.	8-A-12T	1	1.08 .97 .76 .72
Ring	0712-01-01	1	.03 .02	Socket Turr.	8-C-12	1	.75 .68 .53 .50
			1- 500- 1000- 499 999 4999	Term. Turr.	† 8-H-6	1	.42 .38 .29 .28
Spacer	0865-1507/.313	1	.04 .03 .02	Term. Turr.	8-H-12	1	.47 .42 .33 .31
Spacer	0865-1513/.500	1	.04 .03 .02	Socket Turr.	8-M-9T	1	.69 .62 .48 .46
Catch	* 0911-3-Pkg. C	100	1.98 Any Quantity	Socket Turr.	8-M-12T	1	.72 .65 .50 .48
Receptacle	* 0917-2-Pkg. 25	1	2.84 Any Quantity	Socket Turr.	8-N-9T	1	.69 .62 .48 .46
Fastener	2AA2-Pkg. 25	25	1.25 Any Quantity	Socket Turr.	8-N-12T	1	.72 .65 .50 .48
Nut	4/40-K-Pkg. C	100	3.29 Any Quantity	Socket Turr.	8-O-9T	1	.65 .59 .46 .44
Nut	4/40-U-Pkg. L	50	1.00 Any Quantity	Socket Turr.	8-O-12T	1	.69 .62 .48 .46
Nut	4/40-U-Bulk		14.80/M 1000 pcs. 13.32/M 5000 pcs. 12.43/M 25,000 pcs. 9.92/M 50,000 pcs.	Socket Turr.	9-A-12T-440	1	1.07 .96 .75 .72
			1- 50- 200- 500- 49 199 499 999	Term. Turr.	10-12	1	.56 .50 .39 .38
Plug-in	* 4-EK3	1	6.60 5.94 4.62 4.42	Term. Turr.	10-12-C	1	.62 .56 .43 .42
Plug-in	* 4-HK3	1	6.84 6.16 4.79 4.58	Term. Turr.	† 10-H-6	1	.45 .41 .32 .30
Socket Turr.	† 4-MH-6	1	.60 .54 .42 .40	Term. Turr.	† 10-H-12	1	.50 .45 .35 .34
Socket Turr.	† 4-NH-6	1	.60 .54 .42 .40	Socket Turr.	10-MB-12T	1	.81 .73 .57 .54
Nut	4Z-U-Pkg. L	50	1.25 Any Quantity	Socket Turr.	† 10-MB-18	1	.86 .77 .60 .58
			1- 50- 200- 500- 49 199 499 999	Socket Turr.	10-NB-12T	1	.81 .73 .57 .54
Nut	4Z-U-Bulk		17.14/M 1000 pcs. 15.43/M 5000 pcs. 14.40/M 25,000 pcs. 11.48/M 50,000 pcs.	Socket Turr.	† 10-NB-18	1	.86 .77 .60 .58
			4.09 Any Quantity	Socket Turr.	† 10-NB-24	1	.91 .82 .64 .61
Nut	5/40-K-Pkg. L	50		Socket Turr.	10-O-9T	1	.69 .62 .48 .46
			1- 50- 200- 500- 49 199 499 999	Socket Turr.	10-O-12T	1	.73 .66 .51 .49
Socket Turr.	5-A-12T	1	1.05 .95 .74 .70				1- 20- 100- 200- 19 99 199 999
Plug-in	* 5-E2K3	1	7.20 6.48 5.04 4.82	Vectorbord	11AA7EP	1	.30 .27 .25 .20
Plug-in	* 5-HK3	1	7.04 6.34 4.93 4.72				1- 50- 200- 500- 49 199 499 999
Nut	6/32-K-Pkg. C	100	3.44 Any Quantity	Term. Turr.	12-12	1	.61 .55 .43 .41
			1- 50- 200- 500- 49 199 499 999	Term. Turr.	12-12-C	1	.65 .59 .46 .44
Term. Turr.	6-12	1	.50 .45 .35 .34	Socket Turr.	12-MB-12	1	.84 .76 .59 .50
Term. Turr.	6-12-C	1	.59 .53 .41 .40	Socket Turr.	12-MB-18	1	.89 .80 .62 .60
Socket Turr.	6-A-12T	1	1.06 .95 .74 .71	Socket Turr.	12-NB-12	1	.84 .76 .59 .56
Socket Turr.	6-A-12T-440	1	1.03 .93 .72 .69	Socket Turr.	12-NB-18	1	.89 .80 .62 .60
							1- 20- 100- 200- 19 99 199 999
				Vectorbord	15AA5	1	.21 .19 .18 .14
				Vectorbord	15AA5EP	1	.33 .30 .28 .22
				Vectorbord	17/4.8WE	1	2.04 1.84 1.71 1.37

* LIMITED AUTHORIZED VECTOR INDUSTRIAL DISTRIBUTORS AND O.E.M. - † LIMITED TO O.E.M.

VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area-213 Phone 245-8971

TXW 213-240-2162

Vector

DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
			1- 19	20- 99	100- 199	200- 999				1- 19	20- 99	100- 199	200- 999
Vectorbord	17/8.5XXX	1	1.63	1.47	1.37	1.09	Vectorbord	64A18	1	1.25	1.13	1.05	.84
Vectorbord	18A18	1	.43	.39	.36	.29	Vectorbord	64A18W	1	6.95	6.26	5.84	4.66
Vectorbord	18AA18EP	1	.84	.76	.71	.56	Vectorbord	64A18WE	1	3.72	3.35	3.12	2.49
			1- 49	50- 199	200- 499	500- 999	Vectorbord	64A32WE	1	5.86	5.27	4.92	3.93
							Vectorbord	64AA18	1	1.60	1.44	1.34	1.07
Kit	20X	1	6.25	5.63	4.38	4.19	Vectorbord	64AA18EP	1	2.73	2.46	2.29	1.83
Kit	21X	1	15.25	13.73	10.68	10.22	Vectorbord	64AA32	1	2.45	2.21	2.06	1.64
Kit	22X	1	10.50	9.45	7.35	7.04	Vectorbord	64AA32EP	1	4.39	3.95	3.69	2.94
Kit	25X	1	19.50	17.55	13.65	13.07	Vectorbord	64AA132	1	8.62	7.76	7.24	5.78
Kit	25XS	1	16.50	14.85	11.55	11.06	Vectorbord	72A33	1	2.24	2.02	1.88	1.50
Kit	27X	1	5.95	5.36	4.17	3.99	Microbord	76M38/016	1	1.67	1.51	1.41	1.13
Kit	27XA	1	5.95	5.36	4.17	3.99	Microbord	76M38/032	1	1.52	1.37	1.28	1.02
Kit	* 28X	1	25.00	22.50	17.50	16.75	Microbord	83K38/032	1	3.36	3.02	2.82	2.25
			1- 19	20- 99	100- 199	200- 999	Microbord	84Q29/032	1	4.39	3.95	3.69	2.94
Microbord	29Q9/032	1	.90	.81	.76	.60	Vectorbord	85C24	1	1.25	1.13	1.05	.89
Microbord	29Q22/016	1	2.07	1.86	1.74	1.39	Vectorbord	85F24EP	1	2.06	1.85	1.73	1.38
Microbord	29Q22/032	1	1.38	1.24	1.16	.92	Vectorbord	85F42EP	1	3.17	2.85	2.66	2.12
Vectorbord	32A3	1	.30	.27	.25	.20	Vectorbord	85F42WEC1	1	9.33	8.40	7.84	6.25
			1- 49	50- 199	200- 499	500- 999	Vectorbord	85F42WEC2	1	10.25	9.23	8.61	6.87
Term. Strip	* 32A3-T6.0	1	1.19	1.07	.83	.80	Vectorbord	85G24	1	1.25	1.13	1.05	.84
Term. Strip	* 32A3-T9.1	1	2.07	1.86	1.45	1.39	Vectorbord	85G24EP	1	2.06	1.85	1.73	1.38
Term. Strip	* 32A5-T9.1	1	2.24	2.02	1.57	1.50	Vectorbord	85G24W	1	7.12	6.41	5.98	4.77
			1- 19	20- 99	100- 199	200- 999	Vectorbord	85G24WE	1	3.81	3.43	3.20	2.55
Vectorbord	32A9	1	.45	.41	.38	.30	Vectorbord	85G42	1	1.92	1.73	1.61	1.29
Vectorbord	32A18WE	1	1.89	1.70	1.59	1.27	Vectorbord	85G42EP	1	3.17	2.85	2.66	2.12
Vectorbord	32A32T/125	1	1.55	1.40	1.30	1.04	Vectorbord	85G42WE	1	6.60	5.94	5.54	4.42
Vectorbord	32AA5	1	.48	.43	.40	.32	Vectorbord	90B30	1	1.62	1.46	1.36	1.09
			1- 49	50- 199	200- 499	500- 999	Vectorbord	95G43	1	2.32	2.09	1.95	1.55
Term. Strip	* 32AA5-T9.1	1	2.29	2.06	1.60	1.53	Vectorbord	95G87	1	4.16	3.74	3.49	2.79
			1- 19	20- 99	100- 199	200- 999	Vectorbord	95G175	1	7.62	6.86	6.40	5.11
Vectorbord	32AA7	1	.54	.49	.45	.36	Vectorbord	120E33EP	1	2.23	2.01	1.87	1.49
Vectorbord	32AA7EP	1	.75	.68	.63	.50	Vectorbord	120E33WE	1	3.99	3.59	3.35	2.67
Vectorbord	32AA9	1	.60	.54	.50	.40	Microbord	126M76/032	1	2.92	2.63	2.45	1.96
Vectorbord	32AA18	1	.84	.76	.71	.56	Microbord	166M76/032	1	7.25	6.53	6.09	4.86
Vectorbord	32AA18EP	1	1.40	1.26	1.18	.94	Microbord	168K38/016	1	11.12	10.01	9.34	7.45
Vectorbord	32AA32	1	1.28	1.15	1.08	.86	Microbord	168K38/032	1	6.42	5.78	5.39	4.30
Vectorbord	32AA32EP	1	2.14	1.93	1.80	1.43	Microbord	169P59/016	1	6.58	5.92	5.53	4.41
Microbord	33K19/032	1	1.30	1.17	1.09	.87	Microbord	169P59/032	1	4.82	4.34	4.05	3.23
Vectorbord	42F22C1	1	1.05	.95	.88	.70	Vectorbord	170H48WE	1	4.07	3.66	3.42	2.73
Vectorbord	42F22C2	1	1.32	1.19	1.11	.88	Microbord	336M76/016	1	10.89	9.80	9.15	7.30
Vectorbord	42F22WEC1	1	2.55	2.30	2.14	1.71	Microbord	336M76/032	1	8.50	7.65	7.14	5.70
Vectorbord	42F22WEC2	1	2.60	2.34	2.18	1.74				1- 49	50- 199	200- 499	500- 999
Vectorbord	42G22WEC1	1	2.55	2.30	2.14	1.71	Term. Card	* 511	1	.63	.57	.44	.42
Vectorbord	42G22WEC2	1	2.60	2.34	2.18	1.74	Term. Card	* 512	1	.74	.67	.52	.50
Vectorbord	42G24	1	.84	.76	.71	.56	Term. Card	* 513	1	.74	.67	.52	.50
Vectorbord	42G24EP	1	.88	.79	.74	.59	Term. Card	* 514	1	.83	.75	.58	.56
Vectorbord	42G24WE	1	1.94	1.75	1.63	1.30	Wafer	515	1	.28	.25	.20	.19
Vectorbord	42G24WE/032	1	1.25	1.13	1.05	.84	Wafer	516	1	.25	.23	.18	.17
Vectorbord	42G42	1	1.25	1.13	1.05	.84	Wafer	520	1	.25	.23	.18	.17
Vectorbord	42G42EP	1	1.80	1.62	1.51	1.21	Socket	567-1C	1	1.50	1.35	1.05	1.01
Vectorbord	45A45T/125	1	2.54	2.29	2.13	1.70	Socket	568-1C	1	1.65	1.49	1.16	1.11
Vectorbord	45B7	1	.39	.35	.33	.26	Socket	569-1C	1	1.35	1.22	.95	.90
Vectorbord	45B30	1	.84	.76	.71	.56	Socket	570-B	1	1.20	1.08	.84	.80
Microbord	59P19/032	1	1.09	.98	.92	.73	Wafer Turr.	650	1	.75	.68	.53	.50
Microbord	59P44/032	1	1.55	1.40	1.30	1.04	Wafer Turr.	652	1	.81	.73	.57	.54
Microbord	63K38/032	1	2.69	2.42	2.26	1.80	Wafer Turr.	654	1	.87	.78	.61	.58
			1- 19	20- 99	100- 199	200- 999	Plugbord	* 812	1	2.73	2.46	2.29	1.83
							Plugbord	* 812WE	1	3.23	2.91	2.71	2.16
							Plugbord	* 837	1	2.13	1.92	1.79	1.43
							Plugbord	* 837F	1	2.13	1.92	1.79	1.43
							Plugbord	* 837WE	1	2.36	2.12	1.98	1.58

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DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
			1- 19	20- 99	100- 199	200- 999				1- 19	20- 99	100- 199	200- 999
Plugbord	* 838	1	3.34	3.17	3.06	2.77	Plugbord	† 2123A	1	6.58	5.92	5.53	4.41
Plugbord	* 838A	1	2.57	2.42	2.33	2.08	Plugbord	* 2123AWE	1	7.63	6.87	6.41	5.11
Plugbord	* 838AWE	1	3.19	2.98	2.85	2.49							
Plugbord	* 838C	1	1.35	1.22	1.13	.90				1- 499	500- 999	1000- 4999	
Plugbord	* 838D	1	1.82	1.64	1.53	1.22	Bracket	2211/6	1	.11	.08	.07	
Plugbord	* 838PWE	1	3.56	3.31	3.16	2.74	Transmount	2221WE	1	.04	.03	.02	
Plugbord	* 838WE	1	3.92	3.69	3.55	3.16	Case	* 2287-7	1	.10	.08	.06	
Plugbord	* 842	1	2.25	2.03	1.89	1.51							
Plugbord	* 842WE	1	3.00	2.70	2.52	2.00				1- 19	20- 99	100- 199	200- 999
Plugbord	* 846	1	1.75	1.58	1.47	1.17	Plugbord	† 2292	1	2.45	2.21	2.06	1.64
Plugbord	* 846A	1	1.60	1.44	1.34	1.07	Plugbord	† 2292A	1	1.70	1.53	1.43	1.14
Plugbord	* 846AWE	1	2.15	1.94	1.81	1.44	Plugbord	† 2292B	1	1.41	1.27	1.18	.94
Plugbord	* 846WE	1	2.30	2.07	1.93	1.54	Plugbord	† 2309B	1	4.40	3.96	3.70	2.95
Plugbord	* 847	1	2.22	2.00	1.86	1.49	Plugbord	† 2309BWE	1	5.00	4.50	4.00	3.35
Plugbord	* 847A	1	1.39	1.25	1.17	.93	Plugbord	* 2309C	1	5.53	4.98	4.65	3.71
Plugbord	* 847AWE	1	1.81	1.63	1.52	1.21	Plugbord	† 2309CWE	1	6.11	5.50	5.13	4.09
Plugbord	* 847B	1	1.06	.95	.89	.71	Wire	2323A-20/5	1	.97 Any Quantity			
Plugbord	* 847BWE	1	1.48	1.33	1.24	.99	Wire	2323A-20/6	1	.75 Any Quantity			
Plugbord	* 847WE	1	2.64	2.38	2.22	1.77							
Plugbord	* 848WE	1	5.58	5.02	4.69	3.74				1- 19	20- 99	100- 199	200- 999
Plugbord	* 904	1	3.70	3.33	3.11	2.48	Plugbord	* 2436	1	4.81	4.33	4.04	3.22
Plugbord	* 918	1	6.65	5.99	5.59	4.46	Plugbord	† 2436A	1	2.92	2.63	2.45	1.96
Plugbord	† 927	1	2.75	2.48	2.31	1.84	Plugbord	† 2436B	1	2.07	1.86	1.74	1.39
Pins	1110-39-Pkg. 25	25	1.08 Any Quantity				Plugbord	* 2436WE	1	5.43	4.89	4.56	3.64
Pins	1110-49-Pkg. 25	25	1.00 Any Quantity				Plugbord	† 2536AWE	1	4.17	3.75	3.50	2.79
Pins	1110-49-Pkg. C	100	2.40 Any Quantity				Plugbord	† 2536BWE	1	3.32	2.99	2.79	2.22
Pins	1110-49-S-Pkg. 25	25	.67 Any Quantity				Plugbord	* 2536WE	1	6.38	5.74	5.36	4.27
Pins	1111-40-Pkg. 25	25	1.24 Any Quantity							1- 49	50- 199	200- 499	500- 999
Pins	1111-51-S-Pkg. 25	25	.54 Any Quantity				Tape	2592	1	.87	.78	.61	.58
Roll Pin	1111-63-Pkg. 25	25	.91 Any Quantity				Tape	2593	1	.72	.65	.50	.48
			1- 19	20- 99	100- 199	200- 999	Etchant	2594	1	1.25	1.13	.88	.84
Adapter	1262	1	1.75	1.58	1.47	1.17	Clips	2595-Pkg. 250	250	.75 Any Quantity			
Adapter	1263	1	1.75	1.58	1.47	1.17	Pen	2596	1	1.50 Any Quantity			
Adapter	1264	1	1.75	1.58	1.47	1.17							
Contact	* 1723/1-Bulk		27.20/M Any Quantity							1- 499	500- 999	1000- 4999	
Contact	* 1723B/1-Bulk		38.37/M Any Quantity				Lock Shaft	* 2710-16	1	.06	.05	.04	
			1- 99	100- 249	250- 499		Lock Shaft	* 2711-8	1	.21	.16	.13	
Contact Strip	* 1746/11	1	2.34	1.89	1.62		Lock Shaft	* 2711-9	1	.21	.16	.13	
Contact Strip	* 1751/2	1	1.00 Any Quantity				Lock Shaft	* 2711-10	1	.06	.05	.04	
Contact Strip	* 1751/4	1	1.10 Any Quantity				Lock Shaft	* 2711-11	1	.20	.15	.12	
Contact	* 1753A/12-Pkg. L	50	1.96 Any Quantity				Lock Shaft	* 2711-12	1	.20	.15	.12	
			1- 49	50- 199	200- 499	500- 999	Lock Shaft	* 2711-15	1	.06	.05	.04	
Case	* 1930-01/1	1	2.08	1.87	1.46	1.39	Lock Shaft	* 2711-17	1	.06	.05	.04	
Case	* 1930-01/2	1	3.07	2.76	2.15	2.06	Term. Strip	* 2896	1	.20	.15	.12	
Case	* 1930-01/5	1	2.48	2.23	1.74	1.66	Term. Strip	* 2897	1	.26	.20	.16	
Case	* 1930-01/6	1	3.08	2.77	2.16	2.06	Terminal Bd.	* 2898	1	.17	.13	.10	
Case	* 1930-01/7	1	3.07	2.76	2.15	2.06	Terminal Bd.	* 2899	1	.31	.23	.19	
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Case	* 1930-16/6	1	1.02	.92	.71	.68	Terminal Bd.	* 2900	1	1.80	1.62	1.26	1.21
Case	* 1930-17/10	1	.30	.27	.21	.20				1- 499	500- 999	1000- 4999	
			.15	.11	.09		Terminal Bd.	* 2903	1	.34	.26	.20	
Case	* 1930-19/4	1					Cage	† 3032	1	16.50 Any Quantity			
			1- 49	50- 199	200- 499	500- 999	Cage	† 3033	1	16.50 Any Quantity			
Case	* 1930-19/11	1	.52	.47	.36	.35	Mtg. Strip	† 3034	2	3.50 Any Quantity			
Case	* 1930-19/15	1	.40	.36	.28	.27	Mtg. Strip	† 3035	2	4.00 Any Quantity			
			1- 499	500- 999	1000- 4999		Mtg. Panel	† 3036	1	3.00 Any Quantity			
Case	* 1930-19/17	1	.15	.11	.09		Mtg. Panel	† 3037	1	3.00 Any Quantity			
							Front Panel	† 3038	1	9.25 Any Quantity			

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VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

TWX 213-240-2162



DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				
			1- 19	20- 99	100- 199	200- 999				1- 499	500- 999	1000- 4999		
Plugbord	* 3040WE	1	1.17	1.05	.98	.78	Bracket	B20D	1	.26	.20	.16		
Plugbord	* 3042WE	1	1.98	1.78	1.66	1.33	Bracket	B21-Pkg. 4	4	.42	Any Quantity			
Plugbord	* 3045WE	1	1.04	.94	.87	.70								
Plugbord	* 3046WE	1	1.15	1.04	.97	.77	Bracket	B21-Bulk		4.79/C	100-900 pcs.			
Plugbord	* 3047WE	1	1.83	1.65	1.54	1.23				40.24/M	1000 pcs.			
										36.22/M	5000 pcs.			
Plugbord	* 3048WE	1	2.05	1.85	1.72	1.37				33.80/M	10,000 pcs.			
Plugbord	† 3057	1	2.82	2.03	1.76		Bracket	B22-Pkg. 4	4	.29	Any Quantity			
Plugbord	† 3058	1	2.94	2.12	1.84		Bracket	B22-Bulk		2.67/C	100-900 pcs.			
Plugbord	† 3059	1	2.99	2.18	1.87					22.43/M	1000 pcs.			
Plugbord	† 3060	1	3.50	2.60	2.21					20.18/M	5000 pcs.			
										18.84/M	10,000 pcs.			
Plugbord	† 3061	1	3.10	2.26	1.97									
Plugbord	† 3062	1	3.29	2.42	2.09		Bracket	B23-Pkg. 4	4	.42	Any Quantity			
Plugbord	† 3063	1	3.31	2.44	2.11		Bracket	B23-Bulk		4.79/C	100-900 pcs.			
Plugbord	† 3064	1	4.17	3.16	2.65					40.24/M	1000 pcs.			
Plugbord	† 3065	1	3.45	2.55	2.26					36.22/M	5000 pcs.			
										33.80/M	10,000 pcs.			
Plugbord	† 3066	1	3.65	2.72	2.34									
Plugbord	† 3067	1	3.71	2.76	2.38		Bracket	B24-Pkg. 4	4	.29	Any Quantity			
Plugbord	† 3068	1	4.89	3.75	3.17		Bracket	B24-Bulk		2.67/C	100-900 pcs.			
Vectorbord	3070-1XXXP	1	.84	.76	.71	.59				22.43/M	1000 pcs.			
										20.18/M	5000 pcs.			
										18.84/M	10,000 pcs.			
			1- 49	50- 199	200- 499	500- 999								
Ink	3082	1	.48	.43	.34	.32	Bracket	B24A-Pkg. 4	4	.29	Any Quantity			
							Bracket	B24A-Bulk		2.67/C	100-900 pcs.			
										22.43/M	1000 pcs.			
Vectorbord	3106-1XXXP	1	.45	.41	.38	.30				20.18/M	5000 pcs.			
Vectorbord	3106-2XXXP	1	.55	.50	.46	.37				18.84/M	10,000 pcs.			
			1- 49	50- 199	200- 499	500- 999								
Board	* 3234	1	1.37	1.23	.96	.92	Bracket	B25-Pkg. X	10	.26	Any Quantity			
Board	* 3235	1	1.87	1.68	1.31	1.25	Bracket	B25-Bulk		.95/C	100-900 pcs.			
Bracket	B1-Pkg. 4	4	.34	Any Quantity						7.95/M	1000 pcs.			
										7.16/M	5000 pcs.			
										6.68/M	25,000 pcs.			
										5.68/M	50,000 pcs.			
Bracket	B1-Bulk		1.90/C	100-900 pcs.				Bracket	B26-Pkg. X	10	.50	Any Quantity		
			15.78/M	1000 pcs.				Bracket	B26-Bulk		4.20/C	100-900 pcs.		
			14.20/M	5000 pcs.						35.28/M	1000 pcs.			
			13.26/M	25,000 pcs.						31.75/M	5000 pcs.			
			11.27/M	50,000 pcs.						29.63/M	10,000 pcs.			
			1- 49	50- 199	200- 499	500- 999								
Plug-in	* B-8	1	1.33	1.20	.93	.89	Bracket	B27-Pkg. X	10	.60	Any Quantity			
Plug-in	† B-8-M	1	2.16	1.94	1.51	1.45	Bracket	B27-Bulk		5.25/C	100-900 pcs.			
Plug-in	* B-8-N	1	2.18	1.96	1.53	1.46				44.18/M	1000 pcs.			
Plug-in	* B-8-O	1	1.91	1.72	1.34	1.28				39.76/M	5000 pcs.			
Plug-in	* B-8-T	1	1.70	1.53	1.19	1.14				37.12/M	10,000 pcs.			
Plug-in	* B-10	1	1.18	1.06	.83	.79				1- 19	20- 99	100- 199	200- 999	
Plug-in	* B-10-4	1	1.99	1.79	1.39	1.33	Clips	* B30-Pkg. 20	20	.75	.68	.63	.56	
Plug-in	* B-10-M	1	2.07	1.86	1.45	1.39	Clips	* B30.1-Pkg. 20	20	.75	.68	.63	.56	
Plug-in	* B-10-N	1	2.24	2.02	1.57	1.50	Clips	* B31.1-Pkg. 20	20	.75	.68	.63	.56	
Plug-in	* B-10-O	1	1.97	1.77	1.38	1.32	Clips	* B31.4-Pkg. 20	20	.75	.68	.63	.56	
							Clips	* B32-Pkg. 20	20	.75	.68	.63	.56	
Plug-in	* B-10-T	1	1.73	1.56	1.21	1.16								
Plug-in	* B-12	1	1.22	1.10	.85	.73	Clips	* B32.1-Pkg. 20	20	.75	.68	.63	.56	
Plug-in	† B-12-M	1	2.22	2.00	1.55	1.49								
Plug-in	† B-12-N	1	2.26	2.03	1.58	1.51								
Plug-in	† B-12-O	1	2.10	1.89	1.47	1.41				1- 499	500- 999	1000- 4999		
										.20	.15	.12		
Plug-in	* B-12-T	1	1.87	1.68	1.31	1.25	Bracket	* B36-4	1	.20	.15	.12		
Bracket	B20-Pkg. 4	4	.46	Any Quantity				Bracket	* B37-4	1	.20	.15	.12	
			3.95/C	100-900 pcs				Saddle	* B38-2	1	.20	.15	.12	
Bracket	B20-Bulk		35.50/M	1000 pcs.				Bracket	B40	1	.10	.08	.06	
			33.00/M	5000 pcs.				Bracket	B41-Pkg. 5	5	2.63	Any Quantity		
			26.50/M	10,000 pcs.										
							Bracket	B41.1-Pkg. 5	5	3.13	Any Quantity			
Bracket	B20A-Pkg. 4	4	.58	Any Quantity				Corner Clip	B58-Pkg. 4	4	1.50	Any Quantity		
Bracket	B20A-Bulk		6.25/C	100-900 pcs.										
			56.25/M	1000 pcs.						1- 49	50- 199	200- 499	500- 999	
			52.50/M	5000 pcs.				Frame	B81	1	.38	.34	.27	
			41.90/M	10,000 pcs.				Frame	B83	1	.43	.39	.30	
													.29	

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DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
Frame Frame Frame Joiner Strip	B91A B95 B96 B97	1 1 1 1	1- 49	50- 199	200- 499	500- 999	Card Guide Bracket Bracket	* BR15-Pkg. X BR50-Pkg. L BR55-Pkg. L	10 50 50	1- 19	20- 99	100- 199	200- 999
			.45	.41	.32	.30				.75	.68	.63	.50
			.51	.46	.36	.34				.75 Any Quantity			
			.60	.54	.42	.40				.75 Any Quantity			
Board Board Board	B200 B201 B202	1 1 1	1- 499	500- 999	1000- 4999		Bracket Bushings	BR56 BU-1-Pkg. 6	1 6	1- 49	50- 199	200- 499	500- 999
			.09	.07	.05					.50	.45	.35	.34
			.10	.08	.06					1.27 Any Quantity			
			.11	.08	.07					1- 49	50- 199	200- 499	500- 999
Bracket Bracket	BR1-Pkg. X BR1-Bulk	10	.50 Any Quantity				Plug-in Plug-in Plug-in Plug-in	* C-8 * C-8-K1.02 † C-8-M † C-8-MM † C-8-N	1 1 1 1	1.24	1.12	.87	.83
			1.75/C 100-900 pcs.							.93	.84	.65	.62
			7.41/M 1000 pcs.							2.17	1.95	1.52	1.45
			6.67/M 5000 pcs.							2.87	2.58	2.01	1.92
Bracket Bracket	BR2-Pkg. X BR2-Bulk	10	.50 Any Quantity				Plug-in Plug-in Plug-in Plug-in	† C-8-NN † C-8-0 † C-8-T * C-8-TK1.02 * C-10	1 1 1 1	3.04	2.74	2.13	2.04
			1.75/C 100-900 pcs.							1.86	1.67	1.30	1.25
			11.34/M 1000 pcs.							1.74	1.57	1.22	1.17
			10.21/M 5000 pcs.							1.60	1.44	1.12	1.07
Bracket Bracket	BR3-Pkg. X BR3-Bulk	10	.50 Any Quantity				Plug-in Plug-in Plug-in Plug-in	* C-10-K1.02 * C-10-M * C-10-MM * C-10-N * C-10-NN	1 1 1 1	.94	.85	.66	.63
			1.75/C 100-900 pcs.							2.21	1.99	1.55	1.48
			11.34/M 1000 pcs.							2.84	2.56	1.99	1.90
			10.21/M 5000 pcs.							2.24	2.02	1.57	1.50
Bracket Bracket	BR4-Pkg. X BR4-Bulk	10	.50 Any Quantity				Plug-in Plug-in Plug-in Plug-in	* C-10-0 * C-10-T * C-10-TK1.02 * C-12 * C-12-4	1 1 1 1	1.89	1.70	1.32	1.27
			1.75/C 100-900 pcs.							1.85	1.67	1.30	1.24
			11.34/M 1000 pcs.							1.65	1.49	1.16	1.11
			10.21/M 5000 pcs.							1.31	1.18	.92	.88
Bracket Bracket	BR5-Pkg. X BR5-Bulk	10	.50 Any Quantity				Plug-in Plug-in Plug-in Plug-in	* C-12 * C-12-K1.02 * C-12-M * C-12-MM * C-12-N * C-12-NN	1 1 1 1	2.85	2.57	2.00	1.91
			1.75/C 100-900 pcs.							.95	.86	.67	.64
			11.34/M 1000 pcs.							2.24	2.02	1.57	1.50
			10.21/M 5000 pcs.							2.94	2.65	2.06	1.97
Bracket Bracket	BR5.1-Pkg. X BR5.1-Bulk	10	.50 Any Quantity				Plug-in Plug-in Plug-in Plug-in	* C-12-N * C-12-NN * C-12-0 * C-12-T * C-12-TK1.02	1 1 1 1	2.27	2.04	1.59	1.52
			1.75/C 100-900 pcs.							3.11	2.80	2.18	2.08
			11.34/M 1000 pcs.							1.92	1.73	1.34	1.29
			10.21/M 5000 pcs.							1.92	1.73	1.34	1.29
Bracket Bracket	BR6-Pkg. X BR6-Bulk	10	.50 Any Quantity				Base	* C-16-B1	1	1- 499	500- 999	1000- 4999	
			1.75/C 100-900 pcs.							1- 19	20- 99	100- 199	200- 999
			13.80/M 1000 pcs.							.30	.27	.25	.20
			12.42/M 5000 pcs.							.40	.36	.34	.27
Bracket Bracket	BR6-Pkg. X BR6-Bulk	10	.50 Any Quantity				Vectorbord Vectorbord Vectorbord Vectorbord	CU45/30-1 CU45/30-2 CU45/30WE-1 CU45/30WE-2 CU65/45-1	1 1 1 1	.69	.62	.57	.46
			16.20/M 1000 pcs.							.77	.69	.65	.52
			14.58/M 5000 pcs.							.55	.50	.46	.37
			13.60/M 25,000 pcs.										
Bracket Bracket	BR6-Pkg. X BR6-Bulk	10	.50 Any Quantity				Vectorbord Vectorbord Vectorbord Vectorbord	CU65/45-2 CU65/45WE-1 CU65/45WE-2 CU85/45-1 CU85/45-2	1 1 1 1	.77	.69	.65	.52
			11.57/M 50,000 pcs.							1.34	1.21	1.13	.90
			1.90/C 100-900 pcs.							1.52	1.37	1.28	1.02
			16.20/M 1000 pcs.							.70	.63	.59	.47
Card Guide Card Guide Card Guide	* BR7 * BR8 * BR9	1 1 1	1- 19	20- 99	100- 199	200- 999	Vectorbord Vectorbord Vectorbord Vectorbord	CU85/45-1 CU85/45-2 CU85/45WE-1 CU85/45WE-2	1 1 1 1	.98	.88	.82	.66
			.50	.45	.42	.34				1.71	1.54	1.44	1.15
			1.20	1.08	1.01	.80				1.95	1.76	1.64	1.31
			1.75	1.58	1.47	1.17							
Bracket Bracket	BR10-Pkg. X BR10-Bulk	10	.50 Any Quantity				Case Plug-in Plug-in Plug-in Case	* DX-12 * DX-12-2NK-2 * DX-12K * E1X-12 * E1X-12-5NK-2	1 1 1 1	2.66	2.39	1.86	1.78
			2.60/C 100-900 pcs.							4.93	4.44	3.45	3.30
			20.18/M 1000 pcs.							3.36	3.02	2.35	2.25
			18.16/M 5000 pcs.							3.26	2.93	2.28	2.18
Card Guide	* BR14	1	.16 Any Quantity				Case Plug-in Case	* E1X-12-5NK-2 * E1X-12K * E2X-12	1 1 1	9.48	8.53	6.64	6.35
			2.60/C 100-900 pcs.							3.95	3.56	2.77	2.65
			20.18/M 1000 pcs.							2.90	2.61	2.03	1.94
			18.16/M 5000 pcs.										

* LIMITED AUTHORIZED VECTOR INDUSTRIAL DISTRIBUTORS AND O.E.M. - † LIMITED TO O.E.M.

VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area - 213 Phone 245-8971

TWX 213-240-2162

Vector

DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Plug-in	* E2X-12-4NK-2	1	8.04	7.24	5.63	5.39	Case	* H2.050-12	1	3.96	3.56	2.77	2.65
Plug-in	* E2X-12K	1	3.60	3.24	2.52	2.41	Case	* H2.060-12	1	4.18	3.76	2.93	2.80
Case	* EX-12	1	2.61	2.35	1.83	1.75	Case	* H2.075-12	1	4.40	3.96	3.08	2.95
Plug-in	* EX-12-3NK-2	1	6.66	5.99	4.66	4.46	Case	HD2.1-Pkg. L	50	.50	Any Quantity		
Plug-in	* EX-12K	1	3.31	2.98	2.32	2.22	Nut	HD6	1	1.98	Any Quantity		
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Plug-in	* EX-16	1	2.95	2.66	2.07	1.98	Case	* HF16-31-46/21	1	3.50	3.15	2.45	2.35
Plug-in	* EX-16-3NK-3	1	7.19	6.47	5.03	4.82	Case	* HF16-31-46/22	1	3.75	3.38	2.63	2.51
Plug-in	* FLX-12	1	5.61	5.05	3.93	3.76	Case	* HF16-46-66/21	1	3.95	3.56	2.77	2.65
Rubber Feet	FT-1-Pkg. 8	8	.58 Any Quantity				Case	* HF16-46-66/22	1	4.40	3.96	3.08	2.95
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Plug-in	* FX-12	1	2.88	2.59	2.02	1.93	Case	* HF20-31-42/3	1	3.65	3.29	2.56	2.45
Plug-in	* FX-12-4NK-2	1	8.05	7.25	5.64	5.39	Case	* HF20-31-46/21	1	3.75	3.38	2.63	2.51
Plug-in	* FX-12K	1	3.58	3.22	2.51	2.40	Case	* HF20-31-46/23	1	4.00	3.60	2.80	2.68
Case	* G1X-12	1	2.90	2.61	2.03	1.94	Case	* HF20-31-86/1	1	5.00	4.50	3.50	3.35
Plug-in	* G1X-12-3NK-2	1	6.96	6.26	4.87	4.66	Case	* HF20-46-62/1	1	4.00	3.60	2.80	2.68
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Plug-in	* G1X-12K	1	3.60	3.24	2.52	2.41	Case	* HF20-46-62/2	1	4.25	3.83	2.98	2.85
Plug-in	* G1.1X-12	1	3.23	2.91	2.26	2.16	Case	* HF20-46-66/21	1	4.00	3.60	2.80	2.68
Plug-in	* G1.1X-12-4NK-2	1	8.50	7.65	5.85	5.70	Case	* HF20-46-66/23	1	4.65	4.19	3.26	3.12
Plug-in	* G1.1X-12K	1	3.94	3.55	2.76	2.64	Case	* HF-20/86/31	1	7.37	6.63	5.16	4.94
Plug-in	* G2-10	1	1.05	.95	.74	.70	Case	* HF-20/86/31 Caustic etch	1	5.50	4.95	3.85	3.69
Plug-in	* G2-10-2B	1	1.10	.99	.77	.74				1- 499	500- 999	1000- 4999	
Plug-in	* G2-10-4	1	2.04	1.84	1.43	1.37				.28	.21	.17	
Plug-in	* G2-10-4B	1	1.75	1.58	1.23	1.17	Plug	* K	1	.28	.21	.17	
Plug-in	* G2-10-K	1	1.12	1.01	.78	.75	Plug	* K1	1	.28	.21	.17	
Plug-in	* G2-10-KF	1	1.14	1.03	.80	.76				1- 49	50- 199	200- 499	500- 999
			1- 49	50- 199	200- 499	500- 999				.48	.43	.34	.32
Plug-in	* G2-10-M	1	1.94	1.75	1.36	1.30	Plug	* K1.04	1	.64	.58	.45	.43
Plug-in	* G2-10-N	1	1.98	1.78	1.39	1.33	Plug	* K1.06	1				
Plug-in	* G2-10-O	1	2.03	1.83	1.42	1.36				1- 499	500- 999	1000- 4999	
Plug-in	* G2-10-T	1	1.75	1.58	1.23	1.17				.29	.22	.17	
Plug-in	* G2-10-T-1	1	1.76	1.58	1.23	1.18				1- 49	50- 199	200- 499	500- 999
			1- 49	50- 199	200- 499	500- 999				.63	.57	.44	.42
Plug-in	* G2.1-8	1	1.32	1.19	.92	.88	Plug	* K1.14	1	.47	.42	.33	.31
Plug-in	* G2.1-8-4	1	1.90	1.71	1.33	1.27	Plug	* K1.3	1	.47	.42	.33	.31
Plug-in	* G2.1-8-4.6	1	2.13	1.92	1.49	1.43	Plug	* K1.302	1	.47	.42	.33	.31
Plug-in	* G2.1-8-4.6B	1	1.94	1.75	1.36	1.30	Plug	* K1.313	1	.47	.42	.33	.31
Plug-in	* G2.1-8F	1	1.35	1.22	.95	.90	Plug	* K1.321	1	.47	.42	.33	.31
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Plug-in	* G2.1-8-M	1	2.04	1.84	1.43	1.37	Plug	* K1.334	1	.53	.48	.37	.36
Plug-in	* G2.1-8-N	1	2.04	1.84	1.43	1.37	Plug	* K1.4	1	.52	.47	.36	.35
Plug-in	* G2.11-8	1	.77	.69	.54	.52	Plug	* K1.402	1	.52	.47	.36	.35
Plug-in	* G2.2-8	1	1.27	1.14	.89	.85	Plug	* K1.413	1	.52	.47	.36	.35
Plug-in	* G2.2-8-2B	1	1.45	1.31	1.02	.97	Plug	* K1.421	1	.73	.66	.51	.49
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Plug-in	* G2.2-8-4	1	1.88	1.69	1.32	1.26	Plug	* K1.434	1	.58	.52	.41	.39
Plug-in	* G2.2-8-4B	1	1.70	1.53	1.19	1.14	Plug	* K1.5	1	1.21	Any Quantity		
Plug-in	* G2.2-8F	1	1.35	1.22	.95	.90	Plug	* K1.6	1	1.44	Any Quantity		
Plug-in	* G2.2-8-M	1	1.93	1.74	1.35	1.29	Plug	* K1.61	1	2.27	Any Quantity		
Plug-in	* G2.21-8	1	.73	.66	.51	.49	Plug	* K1.62	1	2.67	Any Quantity		
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Case	* H1.030-12	1	3.19	2.87	2.23	2.14	Plug	* K1.71	1	1.00	Any Quantity		
Case	* H1.040-12	1	3.30	2.97	2.31	2.21	Plug	* K1.72	1	1.35	Any Quantity		
Case	* H1.050-12	1	3.41	3.07	2.39	2.28	Plug	* K1.73	1	1.67	Any Quantity		
Case	* H1.060-12	1	3.52	3.17	2.46	2.36	Plug	* K1.75	1	2.09	Any Quantity		
Case	* H1.075-12	1	3.74	3.37	2.62	2.51	Plug	* K1.8	1	1.52	Any Quantity		
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Case	* H1.330-12	1	3.25	2.93	2.28	2.18	Plug	* K1.9	1	.92	Any Quantity		
Case	* H1.340-12	1	3.38	3.04	2.37	2.26	Plug	* K2.02-1-Pkg. 25	25	2.50	Any Quantity		
Case	* H1.350-12	1	3.50	3.15	2.45	2.35	Plug	* K2.06-Pkg. 25	25	2.00	Any Quantity		
Case	* H1.360-12	1	3.64	3.28	2.55	2.44	Patchcord	* K2.09-Pkg. 25	25	2.25	Any Quantity		
Case	* H1.360-16	1	3.90	3.51	2.73	2.61	Patchcord	* K2.15-Pkg. 25	25	2.50	Any Quantity		
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Case	* H1.375-12	1	3.86	3.47	2.70	2.59	Plug	* K3.02-Pkg. 25	25	2.60	Any Quantity		
Case	* H1.530-12	1	3.30	2.97	2.31	2.21	Plug	* K3.06-Pkg. 25	25	2.60	Any Quantity		
Case	* H1.540-12	1	3.45	3.11	2.42	2.31	Patchcord	* K3.09-Pkg. 25	25	2.85	Any Quantity		
Case	* H1.550-12	1	3.60	3.24	2.52	2.41							
Case	* H1.560-12	1	3.76	3.38	2.63	2.52							
			1- 49	50- 199	200- 499	500- 999				1- 49	50- 199	200- 499	500- 999
Case	* H1.575-12	1	3.98	3.58	2.79	2.67							
Case	* H2.030-12	1	3.52	3.17	2.46	2.36							
Case	* H2.040-12	1	3.74	3.37	2.62	2.51							

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DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory	DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory
Patchcord	† K3.15-Pkg. 25	25	3.35 Any Quantity				
			1-39 40 & over				1- 50- 200- 500- 49 199 499 999
Patchcord	† K3.24-Pkg. 25	25	5.00 3.75	Kit	K500	1	7.21 6.49 5.05 4.83
Patchcord	† K4.09-Pkg. 25	25	6.98 4.70	Kit	K502	1	7.36 6.62 5.15 4.93
Patchcord	† K4.15-Pkg. 25	25	12.15 Any Quantity	Kit	K505	1	9.50 8.55 6.65 6.37
			1-39 40 & over	Kit	K506	1	.75 .68 .53 .50
Patchcord	† K4.24-Pkg. 25	25	8.25 5.48	Bracket	K510	1	.25 .23 .18 .17
Patchcord	† K5.09-Pkg. 25	25	9.00 6.00	Kit	K601	1	2.12 1.91 1.48 1.42
Patchcord	† K5.15-Pkg. 25	25	9.50 Any Quantity	Kit	K601-C	1	17.24 15.52 12.07 11.55
			1-39 40 & over	Kit	K602	1	2.15 1.94 1.51 1.44
Patchcord	† K5.24-Pkg. 25	25	10.59 7.09	Kit	K602-C	1	17.39 15.65 12.17 11.65
Patchcord	K6.06-Pkg. 25	25	3.00 Any Quantity	Kit	K603	1	2.83 2.55 1.98 1.90
Patchcord	K6.09-Pkg. 25	25	3.00 Any Quantity	Prong	* K2001-Pkg. C	100	2.40 Any Quantity
Patchcord	K6.15-Pkg. 25	25	3.00 Any Quantity	Prong	* K2001-Bulk		19.15/M 1000-4000 pcs.
Pin	K7-Pkg. 25	25	2.29 Any Quantity				17.74/M 5000-24,000 pcs.
			100-900 1000				16.29/M 25,000-49,000 pcs.
Pin	K7-Bulk		7.50/C 55.00/M				13.68/M 50,000 & over pcs.
Grip Pin	K8-Pkg. 25	25	1.50 Any Quantity				1- 50- 200- 500- 49 199 499 999
			100-900 1000	Plug	† KF1.301	1	.81 .73 .57 .54
Grip Pin	K8-Bulk		4.50/C 35.00/M	Plug	* KF1.335	1	.65 .59 .46 .44
			1- 1000- 5000- 999 4999	Plug	* KF1.435	1	.70 .63 .49 .47
Patchcord	* K9.06	1	.93 .84 .70	Patchcord	† KG3.02-Pkg. 25	25	5.25 3.50
Patchcord	* K9.09	1	.93 .84 .70	Patchcord	† KG3.06-Pkg. 25	25	5.25 3.50
Patchcord	* K9.15	1	.93 .84 .70	Patchcord	† KG3.09-Pkg. 25	25	5.50 3.55
Patchcord	† K10.09	1	.98 Any Quantity	Patchcord	† KG3.15-Pkg. 25	25	6.25 4.25
Patchcord	† K10.15	1	.98 Any Quantity	Patchcord	† KG3.24-Pkg. 25	25	6.99 4.70
			1-39 40 & over	Patchcord	† KG4.09-Pkg. 25	25	10.25 7.25
Patchcord	† K11.09-Pkg. 25	25	16.00 10.75	Patchcord	† KG4.15-Pkg. 25	25	11.50 7.75
Patchcord	† K11.15-Pkg. 25	25	16.75 11.25	Patchcord	† KG4.24-Pkg. 25	25	11.95 7.98
Patchcord	† K12.09-Pkg. 25	25	16.50 10.96	Patchcord	† KG5.09-Pkg. 25	25	14.00 9.50
Patchcord	† K12.15-Pkg. 25	25	17.00 9.30	Patchcord	† KG5.15-Pkg. 25	25	14.75 9.85
			1- 50- 200- 500- 49 199 499 999	Patchcord	† KG5.24-Pkg. 25	25	15.75 10.50
Plug	* K21	1	.74 .67 .52 .50	Patchcord	† KP-1-Pkg. 25	25	2.25 Any Quantity
Plug Pins	* K23A-Pkg. L	50	1.75 Any Quantity				1- 50- 200- 500- 49 199 499 999
Plug Pins	* K23A-Bulk		28.00/M 1000 pcs.	Plug	* KR	1	.44 .40 .31 .29
			25.20/M 5000 pcs.	Plug	* KR1	1	.36 .32 .25 .24
			18.76/M 10,000 pcs.	Plug	* KR1.1	1	.45 .41 .32 .30
Plug Pins	* K23C-Pkg. L	50	1.60 Any Quantity	Plug	* KS	1	.54 .49 .38 .36
Plug Pins	* K23C-Bulk		25.50/M 1000 pcs.	Plug	* KS1	1	.49 .44 .34 .33
			22.95/M 5000 pcs.				
			21.42/M 10,000 pcs.	Plug	* KS1.1	1	.55 .50 .39 .37
Plug Pins	K24A-Pkg. L	50	1.25 Any Quantity	Lock	* L9	1	.50 .45 .35 .34
Plug Pins	K24A-Bulk		18.00/M 1000 pcs.				1- 500- 1000- 499 999 4999
			16.20/M 5000 pcs.	Lockstud	* L9.5	1	.14 .11 .08
			12.60/M 10,000 pcs.	Lockstud	* L9.6	1	.13 .10 .08
Plug Pins	K24C-Pkg. L	50	.75 Any Quantity	Lockstud	* L9.7	1	.17 .13 .10
			1000 5000 10,000	Spring	* L11-Pkg. C	100	1.23 Any Quantity
Plug Pins	K24C-Bulk		9.80/M 8.82/M 6.86/M	Pins	* L12-Pkg. C	100	2.89 Any Quantity
Inbord Pin	K26A-Pkg. L	50	.80 Any Quantity				
Inbord Pin	K26A-Bulk		11.50/M 1000 Pcs.	Washer	* L13-Pkg. C	100	1.26 Any Quantity
			10.35/M 5000 pcs.				1- 500- 1000- 499 999 4999
			8.00/M 10,000 pcs.	Receptacle	* L14	1	.06 .05 .04
Inbord Pin	K26C-Pkg. L	50	.60 Any Quantity				
			1000 5000 10,000	Lock	* L17	1	1.50 Any Quantity
Inbord Pin	K26C-Bulk		7.50/M 6.75/M 5.25/M				1- 500- 1000- 499 999 4999
Inbord Pin	K27A-Pkg. L	50	.75 Any Quantity	Lock	* L18	1	.18 .14 .11
			1000 5000 10,000				
Inbord Pin	K27A-Bulk		9.75/M 8.75/M 6.80/M				1- 50- 200- 500- 49 199 499 999
Inbord Pin	K27C-Pkg. L	50	.60 Any Quantity	Base	* M54	1	.38 .34 .27 .25
			1000 5000 10,000				
Inbord Pin	K27C-Bulk		6.75/M 6.00/M 4.75/M				

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TXW 213-240-2162



DESCRIP	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
Base	*M62	1	1- 499	500- 999	1000- 4999		Tool	P-97	1	1- 49	50- 199	200- 499	500- 999
			.24	.18	.14		Tool	* P-100	1	.81	.73	.57	.54
			1- 49	50- 199	200- 499	500- 999	Tool	* P-101	1	12.25	Any Quantity		
Base	*M63	1	.25	.23	.18	.17	Tool	* P-102	1	12.25	Any Quantity		
Base	*M64	1	.38	.34	.27	.25	Tool	* P-103	1	12.25	Any Quantity		
Base	*M-1010-1	1	1- 499	500- 999	1000- 4999		Tool	* P-104	1	12.25	Any Quantity		
			.12	.09	.07		Tool	* P-105	1	16.69	Any Quantity		
			.22	.17	.13		Tool	* P-106	1	16.50	Any Quantity		
Case	*M-1100-5	1	.22	.17	.13		Tool	* P-107	1	60.00	Any Quantity		
Case	*M-1100-7	1	.22	.17	.13		Tool	* P-108	1	25.00	Any Quantity		
Case	*M-1100-9	1	.21	.16	.13		Tool	P-109	1	14.89	Any Quantity		
Case	*M-1100-13	1	1- 49	50- 199	200- 499	500- 999	Tool	P-110	1	13.07	Any Quantity		
			1.00	.90	.70	.67	Tool	P-111	1	25.25	Any Quantity		
			.31	.28	.22	.21	Tool	P-112	1	25.25	Any Quantity		
Case	*M-1106-5	1	.30	.27	.21	.20	Tool	P-113	1	12.25	Any Quantity		
Case	*M-1106-7	1	.30	.27	.21	.20	Tool	* P-115	1	60.00	Any Quantity		
Case	*M-1106-9	1	.30	.27	.21	.20	Tool	P116	1	1.85	Any Quantity		
Case	*M-1106-13	1	.93	.84	.65	.62	Tool	P116A	1	1.98	Any Quantity		
Base	*M-1136	1	.32	.29	.22	.21	Tool	* P-117	1	.96	Any Quantity		
Base	* MC-2414-2	1	1- 499	500- 999	1000- 4999		Tool	* P-119	1	12.47	Any Quantity		
			.17	.13	.10		Tool	* P-121	1	11.15	Any Quantity		
			.35	Any Quantity			Tool	P122	1	1.00	Any Quantity		
Nut	NT2-1-Pkg. 25	25	.35	Any Quantity			Tool	P-123A	1	1.00	Any Quantity		
Nut	NT4-1-Pkg. 25	25	.35	Any Quantity			Tool	P-123B	1	3.50	Any Quantity		
Probe	P1	1	1- 19	20- 99	100- 199	200- 999	Tool	P-125	1	4.75	Any Quantity		
			.39	.35	.33	.26	Tool	* P-127	1	13.50	Any Quantity		
			.75	.68	.63	.50	Tool	* P-128	1	6.10	Any Quantity		
Tool	* P-3	1	1- 49	50- 199	200- 499	500- 999	Patchboard	P-126	1	1- 19	20- 99	100- 199	200- 999
			.83	.75	.58	.56	Patchboard	* PB33	1	2.95	2.66	2.48	1.98
			1.40	1.26	.98	.94	Patchboard	* PB33-1	1	2.95	2.66	2.48	1.98
Plug	* P7	1	.47	.42	.33	.31	Patchboard	* PB110	1	3.25	2.93	2.73	2.18
Plug	* P7A	1	.47	.42	.33	.31	Patchboard	* PB110-1	1	3.25	2.93	2.73	2.18
Adapter	* P7C	1	1- 19	20- 99	100- 199	200- 999	Patchboard	* PB210	1	4.25	3.83	3.57	2.85
			1.13	1.02	.95	.76	Patchboard	* PB210-1	1	4.25	3.83	3.57	2.85
			1.58	1.42	1.33	1.06	Patchboard	* PB510	1	6.45	5.81	5.42	4.32
Adapter	* P7D	1	1.58	1.42	1.33	1.06	Patchboard	* PB510-1	1	6.45	5.81	5.42	4.32
Plug-in	* P8C	1	1- 49	50- 199	200- 499	500- 999	Patchboard	* PB1010	1	10.75	9.68	9.03	7.20
			.50	.45	.35	.34	Replacement	* PB1010 Replace	1	.86	.77	.72	.58
			.95	.86	.67	.64	Panel	Panel	1	10.85	9.77	9.11	7.27
Plug	* P8L	1	.95	.86	.67	.64	Replacement	* PB1010-1	1	.93	.86	.81	.64
Plug	* P9	1	.52	.47	.36	.35	Panel	* PB1010-1 Replace	1	21.60	19.44	18.14	14.47
Plug	* P9A	1	.52	.47	.36	.35	Patchboard	* PB1020-1	1	32.35	29.12	27.17	21.67
Adapter	* P9C	1	1- 19	20- 99	100- 199	200- 999	Patchboard	* PB1520-1	1	1- 49	50- 199	200- 499	500- 999
			1.26	1.13	1.06	.84	Plug-in	* PK1D	1	.50	.45	.35	.34
			1.67	1.50	1.40	1.12	Panel	PL-4.8/8.5	1	.63	.57	.44	.43
Tool	P-21-6	1	5.00	Any Quantity			Panel	PL-4.8/17	1	1.07	.96	.75	.72
Tool	P-91	1	1- 49	50- 199	200- 499	500- 999	Panel	PL-8.5/17	1	1.63	1.47	1.14	1.09
			.50	.45	.35	.34	Patchboard	† PPB204	1	1-9	10-49		
			.50	.45	.35	.34	Patchboard	† PPB204A	1	75.00	71.25		
Tool	P-92C	1	.25	.23	.18	.17	Patchboard	† PPB204G	1	75.00	71.25		
Tool	* P-93	1	20.50	Any Quantity			Patchboard	† PPB240G	1	90.00	85.50		
Tool	* P-95	1	2.40	Any Quantity			Patchboard	† PPB300	1	105.00	99.75		
Tool	* P-95A	1	3.00	Any Quantity			Patchboard	† PPB300A	1	105.00	99.75		
			1.93	Any Quantity			Patchboard	† PPB300G	1	123.00	116.85		
			12.96	Any Quantity			Patchboard	† PPB450	1	115.00	109.25		
Tool	P-96A	1	5.00	Any Quantity			Patchboard	† PPB450A	1	115.00	109.25		
Tool	P-96B	1	5.00	Any Quantity			Patchboard	† PPB450G	1	142.00	134.90		
							Patchboard	† PPB600	1	125.00	118.75		

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DESCRIP.	CAT. NO.	UNIT PACK	PRICES PER UNIT PACK For larger qty. prices contact factory		DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory	
Patchboard	†PPB600A	1	1-9	10-49	Receptacle	*R23	1	1-500-1000-	
Patchboard	†PPB600G	1	125.00	118.75	Receptacle	*R23C	1	499 999 4999	.13 .10 .08
Patchboard	†PPB1200	1	161.00	152.95	Receptacle	*R24	1		.12 .09 .07
Patchboard	†PPB1200A	1	190.00	180.50	Receptacle	*R24C	1		.13 .10 .08
Patchboard	†PPB1200G	1	190.00	180.50	Receptacle	*R27	1		.12 .09 .07
			262.00	248.90					.18 .14 .11
Plug	*PR7	1	1-49	50-199	Socket	R71	1	1-500-1000-	
Plug	*PR9	1	.92 .83 .64 .62	200-499 500-999				49 199 499 999	.13 .10 .08
Socket	†R1.6	1	.97 .87 .68 .65		Socket	R72B21J	1		.47 .42 .33 .31
Socket	†R1.61	1	3.00 Any Quantity		Socket	R72BR2J	1		.44 .40 .31 .29
Socket	†R1.62	1	3.60 Any Quantity						
Socket	†R1.71	1	4.00 Any Quantity		Socket	R91	1	1-500-1000-	
Socket	†R1.72	1	1.29 Any Quantity					499 999 4999	.17 .13 .10
Socket	†R1.73	1	1.34 Any Quantity						
Socket	†R1.75	1	1.86 Any Quantity						
			1.52 Any Quantity						
Socket	R7	1	1-499	500-999 1000-4999	Socket	R92B21J	1	1-500-1000-	
Socket	R7B	1	.11 .08 .07		Socket	R92BR2J	1	49 199 499 999	.53 .48 .37 .36
Socket	R7B1	1	.20 .15 .12		Paper	R-173-A-Pad L	50		.50 .45 .35 .34
			.20 .15 .12		Paper	R-173-A-1-Pad L	50		2.20 Any Quantity
					Paper	R-173-F-Pad L	50		2.50 Any Quantity
Socket	R7B2	1	1-499	500-199 200-499 500-999					2.10 Any Quantity
Socket	R7B21J	1	.29 .26 .20 .19		Paper	R-173-G-Pad L	50		1.45 Any Quantity
Socket	R7BR2J	1	.47 .42 .33 .31		Paper	R-173-H-Pad L	50		2.67 Any Quantity
			.44 .40 .31 .29		Receptacle	*R310	1		2.94 Any Quantity
					Receptacle	*R315	1		2.95 Any Quantity
					Receptacle	*R320	1		4.59 Any Quantity
Socket	R7J	1	1-499	500-999 1000-4999	Vectoresist	R322	1		2.00 Any Quantity
Socket	R8	1	.20 .15 .12		NumLetr	R393A-1	1		2.00 Any Quantity
			.11 .08 .07		Vectoresist	R405	1		2.00 Any Quantity
					Vectoresist	R405-1-Pkg. 3	3		1.95 Any Quantity
Socket	R8B	1	1-499	500-199 200-499 500-999	Vectoresist	R405-2-Pkg. 3	3		1.95 Any Quantity
Socket	R8B1	1	.53 .48 .37 .36		Vectoresist	R405-3-Pkg. 3	3		1.95 Any Quantity
Socket	R8B2	1	.53 .48 .37 .36		Vectoresist	R405-4-Pkg. 3	3		1.95 Any Quantity
Socket	R8B21J	1	.60 .54 .42 .40		Vectoresist	R406	1		2.00 Any Quantity
Socket	R8BR3J	1	1.00 .90 .70 .67		Vectoresist	R406-1-Pkg. 3	3		1.95 Any Quantity
			1.24 1.12 .87 .83		Vectoresist	R406-2-Pkg. 3	3		1.95 Any Quantity
Socket	R8J	1	.46 .41 .32 .31		Vectoresist	R406-3-Pkg. 3	3		1.95 Any Quantity
					Vectoresist	R406-4-Pkg. 3	3		1.95 Any Quantity
Socket	R8.5	1	1-499	500-999 1000-4999					
			.14 .11 .08		Receptacle	*R612	1	1-100-250 & over	
Socket	R8.6	1	1-499	500-199 200-499 500-999	Receptacle	*R612-1	1	99 249	1.75 1.35 1.19
			.45 .41 .32 .30		Receptacle	*R614	1		1.64 1.12
					Receptacle	*R616	1		1.98 1.54
					Receptacle	*R616-1	1		2.22 1.72 1.47
Socket	R9	1	1-499	500-999 1000-4999					2.04 1.58 1.35
Socket	R9B	1	.13 .10 .08		Receptacle	†R618	1		3.97 Any Quantity
Socket	R9B1	1	.23 .17 .14		Receptacle	*R620	1		2.70 Any Quantity
			.23 .17 .14						
Socket	R9B2	1	1-499	500-199 200-499 500-999	Receptacle	*R629	1	1-100-250 & over	
Socket	R9B21J	1	.31 .28 .22 .21		Receptacle	*R635	1	99 249	3.94 2.63
Socket	R9BR2J	1	.53 .48 .37 .36		Receptacle	*R635-1	1		4.46 2.97 2.48
			.50 .45 .35 .34		Receptacle	*R641	1		4.46 2.97 2.48
									4.95 3.30
Socket	R9J	1	1-499	500-999 1000-4999	Receptacle	*R644	1	1-25-50 & over	
			.23 .17 .14					24 49	2.62 2.10 1.75
Socket	R11	1	1-499	500-199 200-499 500-999	Socket	R712	1	1-500-1000-	
Socket	R11J	1	.41 .37 .29 .27		Receptacle	†R809A	1	499 999 4999	.13 .10 .08
Socket	R14J	1	1.00 .90 .70 .67		Plug	†R809B	1		1.96 1.31 1.18
			.91 .82 .64 .61		Receptacle	†R812A	1		2.01 1.35 1.21
					Plug	†R812B	1		2.12 1.44 1.31
									2.17 1.48 1.34

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VECTOR ELECTRONIC CO., INC. 1100 Flower St. Glendale, Calif. 91201 Area-213 Phone 245-8971

TWX 213-240-2162

Vector

DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
Receptacle	†R815A	1	1- 499	500- 999	1000- 4999		Adapter	T-4	1	1- 19	20- 99	100- 199	200- 999
Plug	†R815B	1	2.29	1.57	1.43		Adapter	T-5	1	2.76	2.48	2.32	1.85
Socket	R912	1	2.34	1.61	1.47		Terminal	*T5.0-Pkg. C	100	2.82	2.54	2.37	1.89
Socket	R912-1	1	.17	.13	.10					2.73	Any Quantity		
Socket	RA2	1	.19	.14	.11					1- 4	5- 24	25- 50	50- 99
		1	.09	.07	.05		Terminal	*T5.0-Pkg. M	1000	18.90	17.01	15.88	15.88
Socket	RA2.4	1	1- 49	50- 199	200- 499	500- 999	Terminal	*T5.1-Pkg. C	100	2.73	Any Quantity		
			.50	.45	.35	.34				1- 4	5- 24	25- 50	50- 99
Socket	RA3	1	1- 499	500- 999	1000- 4999		Terminal	*T5.1-Pkg. M	1000	18.90	17.01	15.88	15.88
			.22	.17	.13					1- 19	20- 99	100- 199	200- 999
Socket	RA4	1	1- 49	50- 199	200- 499	500- 999	Adapter	T-6	1	2.89	2.60	2.43	1.94
Socket	RA4.1	1	.27	.24	.19	.18				1- 4	5- 24	25- 50	50- 99
Socket	RA4.2	1	.35	.32	.25	.23	Eyelet	T7.33-Pkg. M	1000	2.58	2.32	2.17	1.84
Socket	RA4.4	1	.40	.36	.28	.27	Eyelet	T7.34-Pkg. M	1000	2.58	2.32	2.17	1.84
Socket	RA4.41	1	.62	.56	.43	.42	Eyelet	T7.35-Pkg. M	1000	3.59	3.23	3.02	2.56
Socket	RA9	1	.51	.46	.36	.34	Eyelet	T7.36-Pkg. M	1000	4.00	3.60	3.36	2.86
Socket	RA9.1	1	.38	.34	.27	.25	Eyelet	T7.37-Pkg. M	1000	4.80	4.32	4.03	3.43
Socket	RA9.2	1	.37	.33	.26	.25				.50 Any Quantity			
Socket	RA9.4	1	.42	.38	.29	.28	Eyelet	T7.39-Pkg. C	100	1- 4	5- 24	25- 49	50- 99
Socket	RA9.41	1	.64	.58	.45	.43				3.17	2.85	2.66	2.26
Socket	RA9.5	1	.53	.48	.37	.36				1- 19	20- 99	100- 199	200- 999
Socket	RL2	1	.45	.41	.32	.30	Eyelet	T7.39-Pkg. M	1000	2.95	2.66	2.48	1.98
Lamp Socket	RL3	1	.82	.74	.57	.55				1.65	1.49	1.39	1.11
		1	.27	.24	.19	.18	Adapter	T-7-L	1	2.30	2.07	1.93	1.54
Panel	†RP204	1	1-19	20-99			Adapter	T-7-M	1	5.37	4.83	4.51	3.60
Panel	†RP204A	1	11.25	10.13			Adapter	T-7-M-S	1	2.95	2.66	2.48	1.98
Panel	†RP300	1	12.25	11.03			Adapter	T-8-L	1	3.95	3.56	3.32	2.65
Panel	†RP300A	1	12.00	10.80			Adapter	T-8-0	1	1.75	1.58	1.47	1.17
Panel	†RP450	1	13.00	11.70			Adapter	T-8-OC	1	2.90	2.61	2.44	1.94
Panel	†RP450A	1	12.50	11.25			Adapter	T-8-0-S	1	5.05	4.55	4.24	3.38
Panel	†RP600	1	13.50	12.15			Terminal	T9.0-Pkg. C	100	1.25	1.13	1.05	.84
Panel	†RP600A	1	15.75	14.18						1- 4	5- 24	25- 50	50- 99
Panel	†RP1200	1	16.75	15.08			Terminal	T9.0-Pkg. M	1000	8.75	7.35	6.98	6.63
Panel	†RP1200A	1	18.00	16.20						1- 19	20- 99	100- 199	200- 999
			19.00	17.10			Terminal	T9.01-Pkg. C	100	1.25	1.13	1.05	.84
Shield Base	S7	1	1- 499	500- 999	1000- 4999					1- 4	5- 24	25- 50	50- 99
Shield Base	S7.17	1	.07	.05	.04		Terminal	T9.01-Pkg. M	1000	8.75	7.35	6.98	6.63
Shield Base	S7.22	1	.07	.05	.04					1- 19	20- 99	100- 199	200- 999
Shield Base	S9	1	.18	.14	.11		Terminal	T9.1-Pkg. C	100	1.25	1.13	1.05	.84
Shield Base	S9.17	1	.05	.04	.03					1- 4	5- 24	25- 50	50- 99
Shield Base	S9.22	1	.19	.14	.11		Terminal	T9.1-Pkg. M	1000	8.75	7.35	6.98	6.63
Screw	SC2-1-Pkg. 25	25	.35	Any Quantity						1- 19	20- 99	100- 199	200- 999
Screw	SC2-2-Pkg. 25	25	.35	Any Quantity				Terminal	T9.1-Pkg. C	100	1.25	1.13	1.05
Screw	SC4-1-Pkg. L	50	.50	Any Quantity						1- 4	5- 24	25- 49	50- 99
Screw	SC4-2-Pkg. L	50	.45	Any Quantity				Terminal	T9.4-Pkg. C	100	1.25	1.13	1.05
Screw	SC4-3-Pkg. 25	25	.35	Any Quantity						1- 19	20- 99	100- 199	200- 999
Screw	SC6-1-Pkg. 25	25	.75	Any Quantity				Terminal	T9.4-Pkg. M	1000	8.90	7.48	7.11
Spacer	SP12-1-Pkg. 20	20	1.02	Any Quantity						1- 19	20- 99	100- 199	200- 999
			1- 49	50- 199	200- 499	500- 999	Terminal	T9.4A-Pkg. C	100	1.25	1.13	1.05	.84
Side Rails	SR2-3/093	1	.69	.62	.48	.46				1- 19	20- 99	100- 199	200- 999
Side Rails	SR2-4.8/093	1	.79	.71	.55	.53	Terminal	T9.4A-Pkg. C	100	1.25	1.13	1.05	.84
Side Rails	SR2-7/093	1	.91	.82	.64	.61				1- 4	5- 24	25- 49	50- 99
Side Rails	SR2-8.5/093	1	.99	.89	.69	.66	Terminal	T9.4-Pkg. M	1000	8.90	7.48	7.11	6.75
Side Rails	SR2-10/093	1	1.05	.95	.74	.70				1- 19	20- 99	100- 199	200- 999
Side Rails	SR2-12/093	1	1.19	1.07	.83	.80	Terminal	T9.4A-Pkg. C	100	1.25	1.13	1.05	.84
Side Rails	SR2-17/093	1	1.43	1.29	1.00	.96				1- 19	20- 99	100- 199	200- 999
Side Rails	SR2-24/093	1	1.97	1.77	1.38	1.32	Terminal	T9.4A-Pkg. C	100	1.25	1.13	1.05	.84

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DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory				DESCRIP.	CAT. NO.	UNIT PACK	PRICE PER UNIT PACK For larger qty. prices contact factory			
Terminal	T9.4A-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	*T13.1-Pkg. M *T14.0-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
			8.90	7.48	7.11	6.75				31.36	28.22	26.34	26.34
			6.21 Any Quantity										
Terminal	T9.6-Pkg. C	100	1- 19	20- 99	100- 199	200- 999	Terminal	*T14.0-Pkg. M *T14.1-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
			2.10	1.89	1.76	1.41				43.79	39.41	36.78	36.78
			6.21 Any Quantity										
Terminal	T9.6-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	*T14.1-Pkg. M T15.22-Pkg. M	1000 1000	1- 4	5- 24	25- 49	50- 99
			13.69	12.32	11.50	9.17				43.79	39.41	36.78	36.78
Terminal	T9.11-Pkg. C	100	1- 19	20- 99	100- 199	200- 999	Eyelet	T15.23-Pkg. M T15.24-Pkg. M	1000 1000	1- 4	5- 24	25- 49	50- 99
			1.25	1.13	1.05	.84				2.50	2.25	2.10	1.68
Terminal	T9.11-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Eyelet	T15.26-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99
			8.75	7.35	6.98	6.63				2.52	2.27	2.12	1.69
Terminal	T9.62-Pkg. 25	25	1- 19	20- 99	100- 199	200- 999	Eyelet	T15.27-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99
			1.22	1.10	1.02	.82				3.33	3.00	2.80	2.23
Terminal	T9.62-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Lug	T16-Pkg. C	100	1- 4	5- 24	25- 49	50- 99
			32.53	29.28	27.33	21.80				1.70	1.53	1.43	1.14
Terminal	T9.63-Pkg. 25	25	1- 19	20- 99	100- 199	200- 999	Lug	T16-Pkg. M *T18.0-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
			1.75	1.58	1.47	1.17				9.50	8.55	7.98	6.37
Terminal	T9.63-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	*T18.0-Pkg. M *T18.1-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
			46.66	41.99	39.19	31.26				2.34 Any Quantity			
Terminal	T9.64-Pkg. 25	25	1- 19	20- 99	100- 199	200- 999	Terminal	*T18.1-Pkg. M *T19.0-Pkg. C	1000 100	1- 4	5- 24	10- 24	25- over
			2.27	2.04	1.91	1.52				14.40	12.96	11.21	10.98
Terminal	T9.64-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	*T18.1-Pkg. C *T19.0-Pkg. M	1000 100	1- 4	5- 24	25- 49	50- 99
			60.53	54.48	50.85	40.56				3.07 Any Quantity			
Adapter	T-9-N	1	1- 19	20- 99	100- 199	200- 999	Terminal	*T19.0-Pkg. M *T19.1-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
Adapter	T-9-NC	1	1.85	1.67	1.55	1.24				21.32	19.19	17.91	17.91
Adapter	T-9-N-S	1	2.45	2.21	2.06	1.64	Terminal	*T19.1-Pkg. M *T27-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
Terminal	*T10.0-Pkg. C	100	6.00	5.40	5.04	4.02				2.11 Any Quantity			
			3.88	Any Quantity									
Terminal	*T10.0-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	*T19.1-Pkg. C *T27-Pkg. M	1000 100	1- 4	5- 24	25- 49	50- 99
Terminal	*T10.1-Pkg. C	100	27.14	24.43	22.80	22.80				14.48	13.03	12.16	12.16
			3.37	Any Quantity						2.85 Any Quantity			
Terminal	*T10.1-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	T28-Pkg. C	100	1- 19	20- 99	100- 199	200- 999
Terminal	*T11.0-Pkg. C	100	23.52	21.17	19.76	19.76				1.55	1.40	1.30	1.04
			1.75	Any Quantity									
Terminal	*T11.0-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99	Terminal	T28-Pkg. M *T29-Pkg. C	1000 100	1- 4	5- 24	25- 49	50- 99
Terminal	*T11.1-Pkg. C	100	11.94	10.75	10.03	10.03				11.00	9.90	9.24	7.37
			1.75	Any Quantity						2.45 Any Quantity			
Terminal	*T11.1-Pkg. M	1000	1- 4	5- 24	10- 9	over	Terminal	*T29-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99
Terminal	*T13.0-Pkg. M	1000	11.94	10.75	10.03	10.03				13.92	15.23	14.21	14.21
Terminal	*T13.1-Pkg. C	100	5.36	Any Quantity									
Terminal	*T13.0-Pkg. M	1000	1- 4	5- 24	25- 50	50- 99	Terminal	T30-Pkg. X T30-Pkg. C	10 100	1- 19	20- 99	100- 199	200- 999
Terminal	*T13.1-Pkg. C	100	37.62	33.86	31.60	31.60				1.20	1.08	1.01	.80
			4.47	Any Quantity						8.95	8.06	7.52	6.00
							Terminal	T30-Pkg. M	1000	1- 4	5- 24	25- 49	50- 99
										63.93	57.54	53.70	51.14

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Birmingham
M. G. Electronics
3112 6th Avenue, South
Huntsville
Electronic Wholesalers
2310 Bob Wallace Ave., S.W.

ARIZONA

Phoenix
Midland Specialty Company
1930 North 22nd Avenue

Radio Parts
214 South 11th Avenue

CALIFORNIA

Burbank
Valley Electronic Supply Company
1302 West Magnolia Boulevard
Glendale
R. V. Weatherford Company, Inc.
6921 San Fernando Road
Hollywood
Hollywood Radio & Electronics, Inc.
5250 Hollywood Boulevard
Inglewood
Newark Electronics Company, Inc.
4747 Century Boulevard
Lancaster
Manley Electronic Supply, Inc.
45003 North Yucca
Los Angeles
California Electronics Supply, Inc.
1911 Armacost Avenue

Federated Purchaser, Inc. of Calif.
11820 West Olympic Boulevard

Kierulff Electronics, Inc.
2585 Commerce Way

Radio Products Sales, Inc.
1501 South Hill Street

Mountain View
Brill Electronics
855 Terra Bella
Oakland
Brill Electronics
610 East 10th Street

Elmar Electronics, Inc.
140 Eleventh Street
Palo Alto
Zack Electronics
654 High Street
Pasadena
Allied Radio of California, Inc.
2085 East Foothill Boulevard

Electronic Components of Pasadena
1759 East Colorado Blvd.

Empire Electronics Distr., Inc.
37 East Union Street

Riverside
Electronic Supply Riverside, Inc.
2486 Third Street

San Diego
Electronic Components, Inc.
2060 India Street
San Francisco
Zack Electronics
1444 Market Street
San Jose
Quement Industrial Electronics
1000 So. Bascom Avenue
P. O. Box 527
Peninsula Electronic Supply, Inc.
656 South First Street
San Luis Obispo
Mid State Electronics
1441 Monterey Street

COLORADO

Denver
Newark-Denver Electronic Supply Co.
2170 South Grape Street
P. O. Box 22045

CONNECTICUT

New Haven
Radio Shack Corporation
92 York Street
Norwalk
Arrow Electronics, Inc.
225 Main Street
Stamford
Radio Shack Corporation
29 High Ridge Road

DIST. OF COL.

Washington
Capitol Radio Wholesalers
2120-22 14th Street, N.W.

Electronic Wholesalers, Inc.
2345 Sherman Avenue, N. W.

FLORIDA

Melbourne
Electronic Wholesalers, Inc.
1301 Hibiscus Boulevard
Miami
Electronic Wholesalers, Inc.
9390 N.W. 27th Avenue
Orlando
Crescent Electronics
P. O. Box 5604
Tampa and all branches
Thurrow Electronics, Inc.
121 South Water Street

ILLINOIS

Chicago
Allied Electronics Corporation
Subsidiary of Allied Radio Corp.
111 North Campbell Avenue
Newark Electronics Corporation
223 West Madison Street

INDIANA

Indianapolis
Graham Electronics Supply, Inc.
122 South Senate Avenue

Radio Distributing Company
814 North Senate Avenue

LOUISIANA

New Orleans
Radio Parts, Inc.
1112 Magazine Street

MARYLAND

Baltimore
Electronic Wholesalers, Inc.
3004 Wilkens Avenue

Kann Ellert Electronics, Inc.
2050 Rock Rose Avenue

Wholesale Radio Parts
308 West Redwood Street
Beltsville
Powell Electronic-Washington, Inc.
10728 Hanna Street

MASSACHUSETTS

Boston Area

Cramer Electronics, Inc.
320 Needham Street, Newton
De Mambro Electronics
1095 Commonwealth Avenue, Boston
Doric Electronics, Inc.
207 Alewife Brook Parkway, Cambridge

Gerber Radio Supply Company
1900 Columbus Avenue, Boston

Radio Shack Corporation
730 Commonwealth Avenue, Boston

Sager Electrical Supply Company, Inc.
201 Congress Street, Boston

MICHIGAN

Ann Arbor
Wedmeyer Electronic Supply Company
215 North Fourth Avenue
Detroit
Newark-Ferguson, Inc.
20700 Hubbell Avenue

Radio Specialties Company, Inc.
12775 Lyndon Street

MINNESOTA

St. Paul
Gopher Electronics Company
2520 West Larpentour Avenue

MISSOURI

Kansas City
Radiolab, Inc.
3604 Main
University City
Olive Industrial Electronics, Inc.
6662 Olive Street Road

NEVADA

Reno
Electronic Distr. Co. of Nevada
720 Tahoe Street
P. O. Box 2918

NEW JERSEY

Camden
General Radio Supply Company, Inc.
600 Penn Street
Clifton
Eastern Radio Corporation
312 Clifton Avenue

Hanover
State Electronics Parts Corp.
36 Route 10
Springfield
Federated Purchaser, Inc.
155 U. S. Route 22

NEW MEXICO

Alamogordo
Kierulff Electronics
811 First Street

NEW YORK

Binghamton
Stack Industrial Electronics Corp.
45 Washington Street

Buffalo
Radio Equipment Corporation
312 Elm Street

Summit Distributors, Inc.
916 Main Street

New York City Area

Arrow Electronics, Inc.
900 Broad Hollow Road (Rt. 110)
Farmingdale, L. I.

Arrow Electronics, Inc.
65 Cortlandt Street, New York

Harvey Radio Corporation
103 West 43rd Street, New York

H. L. Dalis, Inc.
35-35 24th Street, Long Island City

Harrison Radio Corporation
225 Greenwich Street, New York

Milo Electronics Corporation
530 Canal Street, New York

Newark Electronic Center
160 5th Avenue, New York

Peerless Radio Corporation
19 Wilbur Street, Lynbrook, L. I.

Terminal-Hudson Electronics, Inc.
236 West 17th Street, New York

NORTH CAROLINA

Winston-Salem
Electronics Wholesalers, Inc.
938 Burke Street

OHIO

Akron
Akron Electronic Supply, Inc.
107 South Arlington Street
Cincinnati
Newark-Herrlinger Electronics Corp.
Sub. of Newark Electronics Corp.
112 East Liberty Street
Cleveland
Pioneer Standard Electronics, Inc.
5403 Prospect Avenue

Radio and Electronic Parts Corp.
3235 Prospect Avenue

Columbus
Thompson Radio Supply, Inc.
182 East Long Street

Dayton
Srepco, Inc.
314 Leo Street

OKLAHOMA

Oklahoma City
Trice Wholesale Electronics
4701 North Stiles

Tulsa
Radio, Inc.
1000 South Main Street

OREGON

Portland
Central Distributors
955 N.E. Union Avenue

PENNSYLVANIA

Philadelphia
Powell Electronics, Inc.
Island Road & Enterprise Avenue
Philadelphia International Airport

Radio Electric Service Co. of Penna.
701 Arch Street
Pittsburgh
Radio Parts Company, Inc.
6401 Penn Avenue

RHODE ISLAND

Providence
Wm. Dandreta & Company
28 Wolcott Street

SOUTH CAROLINA

Charleston
Radio Laboratories
475 East Bay Street
P. O. Box 2305

TENNESSE

Fayetteville
Powell Electronics-Huntsville
Box 488

TEXAS

Dallas
Wholesale Electronic Supply
2809 Ross Avenue

TEXAS (CON'T.)

El Paso
Midland Specialty Company
2235 Wyoming Avenue
Fort Worth
Wholesale Electronic Supply
109 South Jennings
P. O. Box 1773
Houston
Harrison Equipment Company, Inc.
1422 San Jacinto Street
P. O. Box 3268

UTAH

Ogden
Ballard Supply Company
3109 Washington Boulevard

WASHINGTON

Seattle
C & G Electronic Company
2600 Second Avenue

WEST VIRGINIA

Beckley
Chemcity Electronic Distributors
1708 South Kanawha Street
P. O. Box 869

WISCONSIN

Milwaukee
Radio Parts Company, Inc.
1314 North 7th Street

CANADA

ALBERTA

Calgary
Smalley's Radio, Ltd.
1105 7th Avenue, S.W.
P. O. Box 220
Edmonton
Taylor, Pearson & Carson, Ltd.
11905 111th Avenue

MANITOBA

Winnipeg
Cam Gard Supply, Ltd.
397 William Avenue

ONTARIO

Downsview
Alpha Aracon Radio Electronics, Ltd.
555 Wilson Avenue

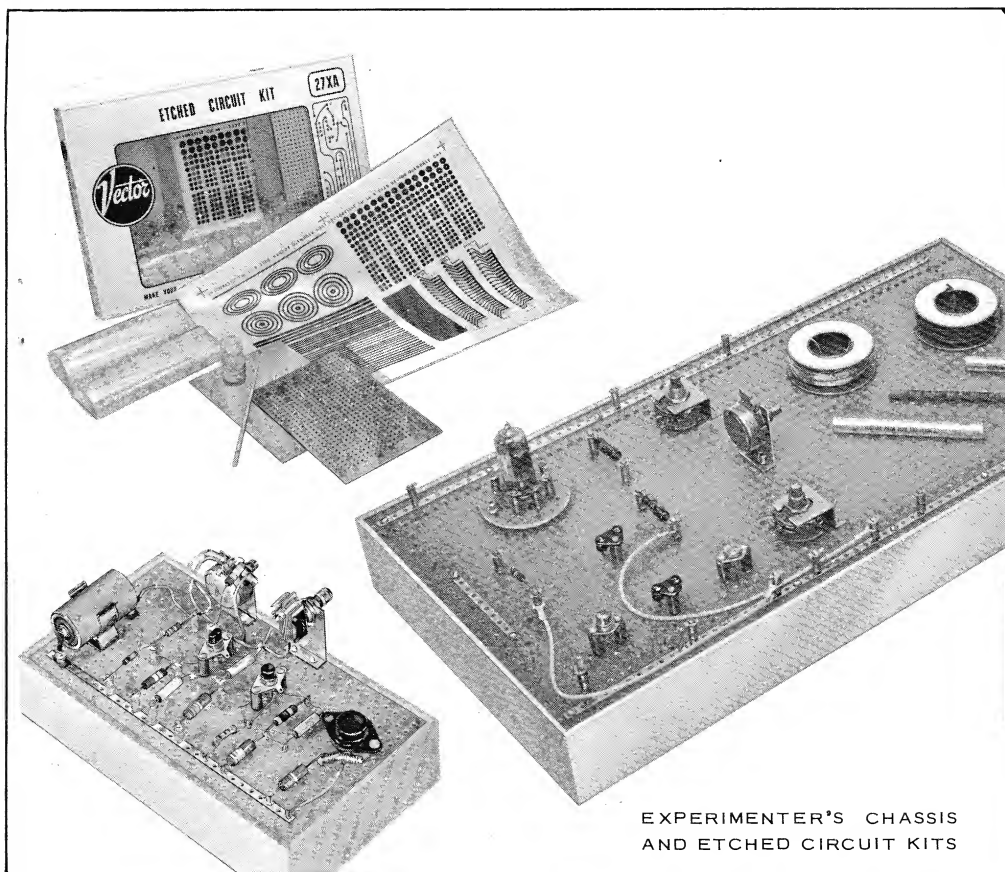
Ottawa
CESCO Electronic, Ltd.
1300 Carling Avenue.
Toronto
Electro Sonic Supply Company, Ltd.
543 Yonge Street

Genuine Autotronics of Canada, Ltd.
140 Kendal Avenue

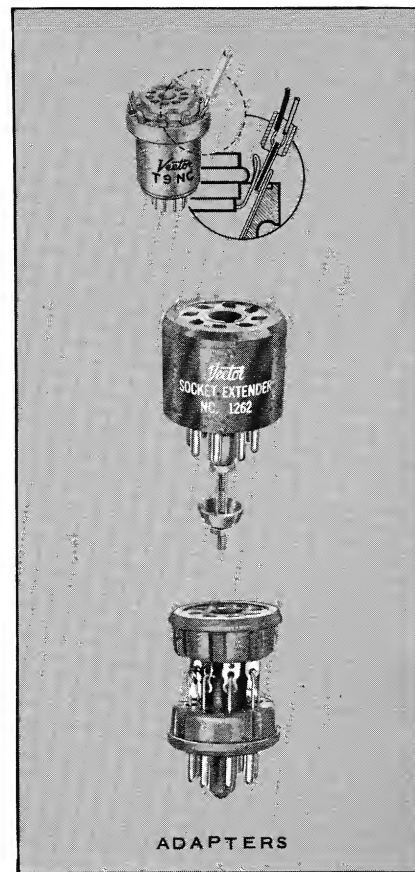
QUEBEC

Montreal
CESCO Electronic, Ltd.
275 Craig Street, West

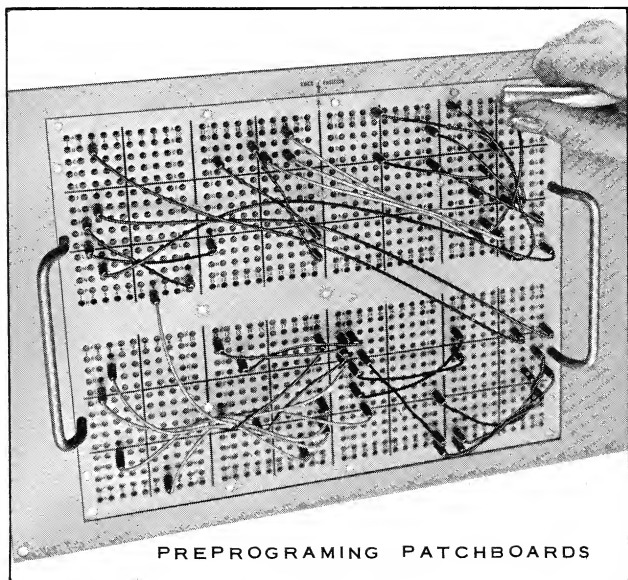
EXPORT - Trans-World Trade 11973 San Vicente Boulevard, Los Angeles 49, Calif.



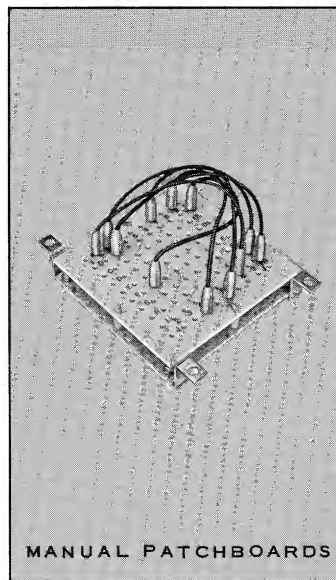
EXPERIMENTER'S CHASSIS
AND ETCHED CIRCUIT KITS



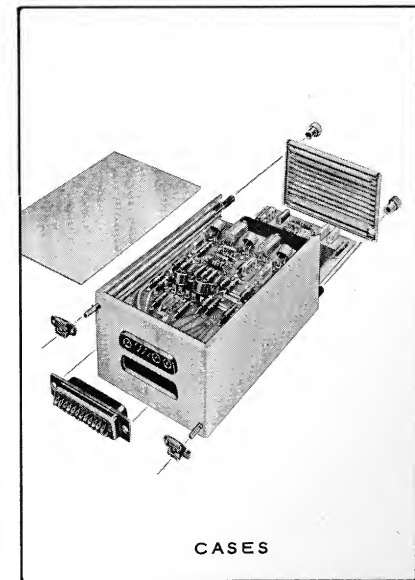
ADAPTERS



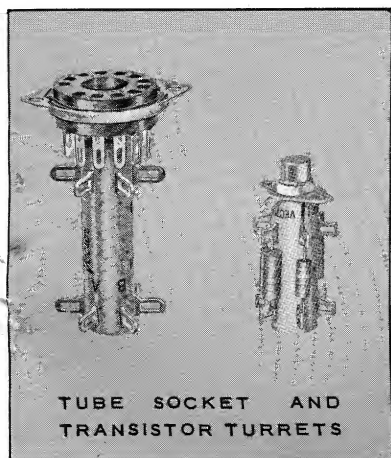
PREPROGRAMMING PATCHBOARDS



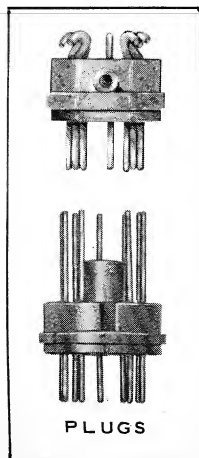
MANUAL PATCHBOARDS



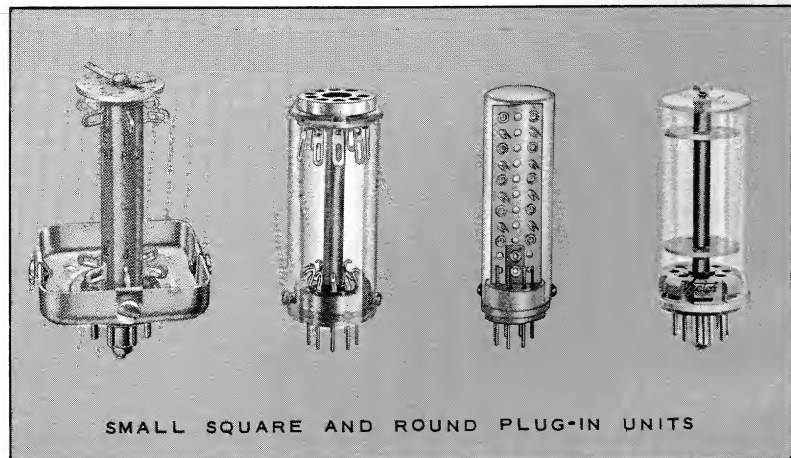
CASES



TUBE SOCKET AND
TRANSISTOR TURRETS



PLUGS



SMALL SQUARE AND ROUND PLUG-IN UNITS

V
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VECTOR ELECTRONIC COMPANY
INCORPORATED
GLENDALE, CALIFORNIA

